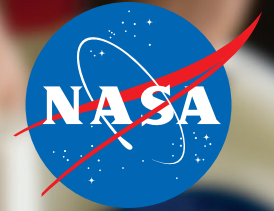


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# GoddardView

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## NASA Goddard Hosts Space Day 2006

By Leslee Cork

The first bus arrived at 8 a.m., followed by another then another. By 10 a.m., all of the anticipated 2,000 sixth grade students and their teachers had arrived at NASA Goddard Space Flight Center to participate in Space Day 2006, a collaborative effort between NASA Goddard and Lockheed Martin. In addition to local area sixth grade students, NASA's Explorer schools, Stellar Teams and Goddard employees with children in the sixth grade, were also invited to take part in this event.

This was Lockheed Martin's 10th year sponsoring Space Day and Goddard's first. This event, which took ten months of planning and preparation, was lead by Kay Armstrong, Space Day Program Manager from Lockheed Martin and Michelle Jones, Outreach Coordinator from the Office of Public Affairs. Together they formed a dynamic team, consisting of representatives from Lockheed Martin, Facilities, Security, and the Office of Public Affairs. This group worked diligently to pull off, one of the most successful events ever hosted at NASA Goddard.

The kickoff ceremony began at 9:30 a.m. and was lead by Orlando Figueroa, Director of Applied Engineering and Technology and Ken Reightler, President of Lockheed Martin Space Operations. When the activity stations opened at 10:00 a.m., the students browsed their mission logs to determine which stations they wanted to visit first. A choice that was quite difficult for some given the fact that there was such a variety to choose from. Stomp Rockets, WJLA Weather Truck, Solar Viewing, Cookin' Up a Comet, Extraordinary Earth and Exploring Meteorites and Craters were just some of the interactive, hands-on activities and demonstrations that were performed by Lockheed Martin Goddard and Maryland Science Center employees, as well as a host of other volunteers from local business organizations.

The "Meet an Astronaut" booth, staffed by astronauts Paul Richards and Ricky Arnold, allowed students to have their picture taken with an astronaut of their choice, receive an autographed photo, and ask the astronauts questions about their experiences in space. Additionally, AOL provided a live downlink and webcast with the International Space Station (ISS) which enabled students to ask astronauts, currently deployed in space, questions about their work.

Science on a Sphere made its debut appearance at Space Day. The enormous circular sphere, located in the large auditorium at the Visitor's Center, looks as if it's floating in mid-air. The students and teachers were awe-stricken as they entered into the theater-style room for one of the four scheduled presentations taking place that day. The amazing architectural design of the sphere was like nothing they had ever seen. One teacher could be overheard making arrangements to bring her students back to the Visitor's Center for another spectacular science presentation on the sphere.

The primary goal of Space Day 2006 was to promote math, science and technology education by nurturing the enthusiasm of young people in these areas. By the end of the day, Lockheed Martin and NASA Goddard were able to say "mission accomplished." ■

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Cover caption: Steven attends science workshops at the National Museum of the Air Force and attended the May 27 Space Day events. He is shown here holding a mineral that is found on the moon as he examines a lunar globe.

Photo Credit: Chris Gunn

## GoddardView Info

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<http://www.nasa.gov/centers/goddard/news/index.html>

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Deadlines: News items and brief announcements for publication in the Goddard View must be received by noon of the 1st and 3rd Wednesday of the month. You may submit contributions to the editor via e-mail at [alittle@pop100.gsfc.nasa.gov](mailto:alittle@pop100.gsfc.nasa.gov). Ideas for new stories are welcome but will be published as space allows. All submissions are subject to editing.

# Goddard Space Day 2006 "A Success!"



Caption: (From left to right) Sixth graders excitedly participate in the stomp rocket launch. A student gazes at a moon rock under glass. Science on a Sphere wow's a young audience at the VC. One student swears never to wash his shirt as Astronaut Paul Richards signs his sleeve and a teacher gets to experience standing on the north and south poles as part of one booths interactive exhibit.

## Tech Transfer Success a Hit at Space Day

By Nancy Pekar

As more than 2,000 sixth graders made their way through the dozens of booths at Space Day on May 4, many of them were intrigued with the device in front of Booth 29, sponsored by Goddard's Office of Technology Transfer (OTT). At that booth, students were allowed to test the youth version of the Secure Ambulation Module—known as S.A.M.-Y—a rehabilitation device for standing and gait therapy based upon Goddard-developed technology.

*"We probably had at least fifty kids try S.A.M.-Y, including three who were in wheelchairs," said Ken Messier, president of Enduro Medical Technology. "One of the kids said he had never walked so far before, and his teacher couldn't believe how well he could walk with S.A.M.-Y."*

S.A.M.-Y is the latest product from the Connecticut-based company. Enduro licensed Goddard's cable-compliant mechanisms as well as an early version of the walker to further develop and manufacture the revolutionary standing and ambulation system.

As with the S.A.M. device for adults, Enduro's S.A.M.-Y provides a safe, stable, standing environment by placing the user in a pelvic harness connected to the wheeled frame. The Goddard cable-compliant technology providing that connection mimics the movement of the hip while controlling the pelvis, providing support and stability during gait therapy. And because it

is lightweight, S.A.M.-Y can be used in the home or school setting as well as in rehab facilities.

By allowing children otherwise confined to a wheelchair to stand, S.A.M.-Y improves circulation, trunk strength, kidney and lung function, and posture. But perhaps more important are the psychological benefits offered by S.A.M.-Y.

*"This was one of the few times those kids were able to be at the same height as their peers," Messier remarked. "Their classmates were so excited, they were cheering them on."*

Meanwhile, the adult version of S.A.M. is still being use successfully at Walter Reed Army Medical Center on U.S. soldiers (see Goddard View, vol. 2, no. 8, p. 5). In addition to benefiting soldiers with spinal cord injuries, S.A.M. is helping another group of patients. "These are patients with traumatic injuries requiring their leg muscles to be rebuilt or who have had their leg muscles start to atrophy while recovering from major surgeries," explained Messier. "The stories of the assistance these soldiers are getting from SAM are quite remarkable."

This is just the latest of Goddard's technology transfer success stories. For more successes and other OTT news, go to <http://techtransfer.gsfc.nasa.gov>. ■



Caption: Ten year-old Michael McCahan from C.T. Reed Elementary School in Lanham, Maryland tries out S.A.M.-Y. Michael said he was amazed at how far he could walk with S.A.M.-Y.

Photo credit: NASA/Fuentek

## NASA Goddard Joins Forces with Six Flags

By Leslee Cork

On April 28 and May 12 NASA participated in Six Flags 8th Annual Physics Day and Math and Science Day events, which were created to educate students about the math, physics, science and technology behind some of their favorite roller coaster rides. These events took place from 10 a.m.—5 p.m. on both days, attracted an estimated 8,000 6th thru 12th grade students, and teachers, from local area schools.

At 9 a.m. sharp the first group of students began arriving, walking excitedly through the main square towards the rides. When they espied the NASA tables, some students took the time to stop, pick up a couple of publications and grab a few goodies. Since this was supposed to also be an educational experience some teachers gave out packets containing exercises students had to complete and turn in by the end of the day.

For Physics Day, Alex Young and Emilie Drobnes provided solar demonstrations, one of which enabled the students to see the sun as its never been seen before. Using the solar telescope, students were able to locate sunspots on the sun's surface and watch them change before their eyes. Carolyn Ng demonstrated electromagnetism using a battery, two wires, a nail and a paper clip, and then made reference to NASA satellite observations of the sun's and Earth's magnetic fields. Meanwhile, John Weis was able to simulate the affects of gravity in space using his Wireless Drop Tower, and attendees were able to sample space food similar to what is eaten by astronauts in space.

Goddard-sponsored For Inspiration and Recognition of Science and Technology (FIRST) Robotics Teams from Woodlawn High School and South River High School, lead by Mike Wade, came out on Math and Science Day



Photo credit: Debbie McCallum

Caption: Emilie Drobnes demonstrates her solar telescope that allows students to locate sunspots on the sun's surface.

to take part in the day's festivities. The students were able to interact with their peers, conduct robotic demonstrations, and discuss the work that went into building these remarkable mechanical creations.

In addition to the robotic demonstrations, attendees also participated in an ultraviolet (UV) bead activity conducted by Carolyn Harden and John Leck entitled, Sunscreen Protection- How Good is Yours? Their activity demonstrated the effectiveness of several levels of sun protection factor (SPF) lotions in blocking the harmful UV rays of the sun. Furthermore, participants were allowed to make UV-sensitive bead bracelets to wear during the day as a reminder of the amount of UV rays to which they were being exposed. The beads changed from white to yellow, orange, red, blue or purple when exposed to light, and the colors intensified with increased UV-ray exposure.

Goddard's Digital Photo booth, which was present both days, gave students a chance to become astronauts for a day through the digital placement of their photo on an astronaut suit template. Students who visited NASA's interactive and informative booths thought it was cool that NASA was there, at Six Flags, supporting these events. ■



Photo credit: Debbie McCallum

Caption: A pair of High School students showing their fashion sense and love for science.

## Goddard Launches a Hurricane Campaign

By Rob Gutro

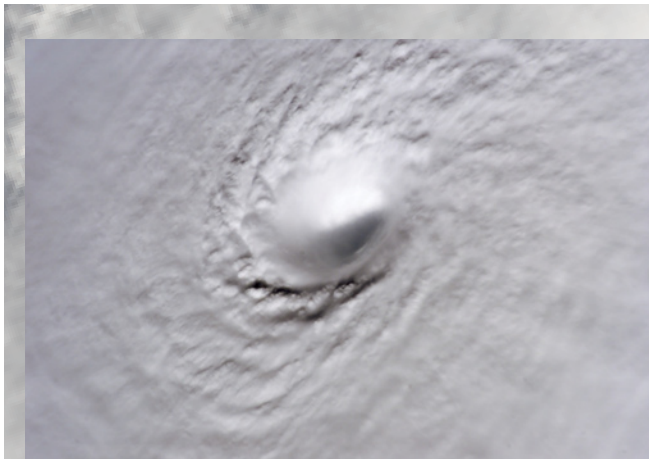


Photo credit: NASA

Caption: This image of Hurricane Wilma was taken at 8:22 a.m. CDT Wednesday, Oct. 19, by the crew aboard NASA's international space station as the complex flew 222 miles above the storm. At the time, Wilma was the strongest Atlantic hurricane in history, with winds near 175 miles per hour. The storm was located in the Caribbean Sea, 340 miles southeast of Cozumel, Mexico.

This year, more than ever, Goddard Public Affairs along with Goddard hurricane scientists are ready for the start of hurricane season, which begins June 1 and lasts until November 30th. Through this coordinated effort and advance planning, Goddard will be able to answer the questions that will come from reporters and the general public when the hurricanes begin.

**NASA has a long history of developing state-of-the-art remote sensors treating all aspects of weather and climate. NASA launched the very first weather satellite in 1960 (TIROS-1); for the first time, hurricane threats to the U.S. could be seen approaching from across the Atlantic.**

Today, NASA's research into hurricanes addresses two key questions: "How are global precipitation, evaporation and the cycling of water changing?" and "How much can weather forecasts be improved by new space-based observations, data assimilation and modeling?" NASA data are also provided to NOAA, to help them enhance their predictions and forecasts.

### NASA-Television Interviews Across the USA

During last year's record-breaking hurricane season, Goddard scientists appeared regularly on major television news programs and other news media.

Goddard TV is planning a live-shot interview campaign on the first day of hurricane season where television stations around the U.S. call into the Goddard Television studio in Building 28, and interview our scientists live on the air. NASA-TV has been doing this for years on various subjects,

Photo credit: NASA

and last year, with Katrina, Rita, Wilma and other hurricanes during the 2005 season, they were swamped with requests and completed hundreds of interviews. This year, Goddard's David Adamec, oceanographer, and Jeff Halverson, meteorologist now at the University of Maryland Baltimore County, will be answering television reporter's questions on the morning of June 1st.

Goddard TV and the Goddard Scientific Visualization Studio will also get to show the world a brand new video of all the tropical storm and hurricane tracks from the 2005 season.

### NASA's Hurricane Resource Web Page

One of NASA's most well-known sources for hurricane information is NASA's Hurricane Resource Web Page ([www.nasa.gov/hurricane](http://www.nasa.gov/hurricane)), created by Goddard staff. This Web resource is for people interested in hurricanes, NASA's cutting-edge research, and the latest satellite pictures and animations. There are a continuous stream of research stories, satellite images (of storms in both the southern and northern hemispheres), and more, constantly being posted to the NASA Hurricane web page. One of the latest stories is how La Nina is not expected to affect hurricane season.

NASA's research on hurricanes is also posted under the Hurricane page's "Latest News" area. In addition, there's an archive of satellite images and information on hurricanes as captured by NASA satellites. This website provides information on specific hurricane-related topics, and educational websites and activities.

### Printed Products and Stories

Last month, in preparation of the season, Goddard finalized and printed a fact sheet on NASA's Role in Hurricane Research. You can find that on-line at:

[http://www.nasa.gov/pdf/147432main\\_hurr\\_fact\\_sheet.pdf](http://www.nasa.gov/pdf/147432main_hurr_fact_sheet.pdf).

### Outreach to Museums and Schools

Public Affairs and Education are working together to fill requests for speakers at schools and museums. Recently, Rob Gutro of Public Affairs (who is also a meteorologist) spoke to over 100 5th grade students visiting Johns Hopkins University Hospital's Science Day in Baltimore. There are also appearances at classrooms being planned. Rob and Goddard scientist Owen Kelley, who studies "Hurricane Hot Towers" will be speaking to over 1,000 children slated to visit the Maryland Science Center in early June.

Continued on Page 7.

# Goddard Launches a Hurricane Campaign

Continued from Page 6.

## Education Outreach

Goddard scientists and educators will be supporting learning about hurricane and atmospheric science by participating in a number of activities. First, any activities, lessons, and other educational materials that have already been produced by any NASA center will be placed on the education links on the hurricane page. After that, the Goddard Education Office will run professional development for using these materials and for updating the teachers' content knowledge of hurricanes. The first of these professional development programs will be held on July 18, 2006 via a Distance Learning Network presentation. Finally, other professional development and information sharing will happen as possibilities present themselves throughout this coming hurricane season.

A set of hurricane lessons/activities will be created for Goddard's new "Science On a Sphere" (SOS). The lessons will tie into National and local standards and into the Maryland Voluntary Curriculum. The lessons will consist of a pre-visit activity, lesson while visiting SOS and a post-visit activity. This will be the first of its kind developed for SOS.

## A Day for Reporters at Goddard

NASA Goddard's Public Affairs office is organizing a day for reporters to visit Goddard at the start of hurricane season. In early June, reporters will come to GSFC for half a day to see what we do in hurricane research. They would also see visualizations from Goddard's Scientific Visualization Studio and meet NASA's hurricane scientists. It is through this day

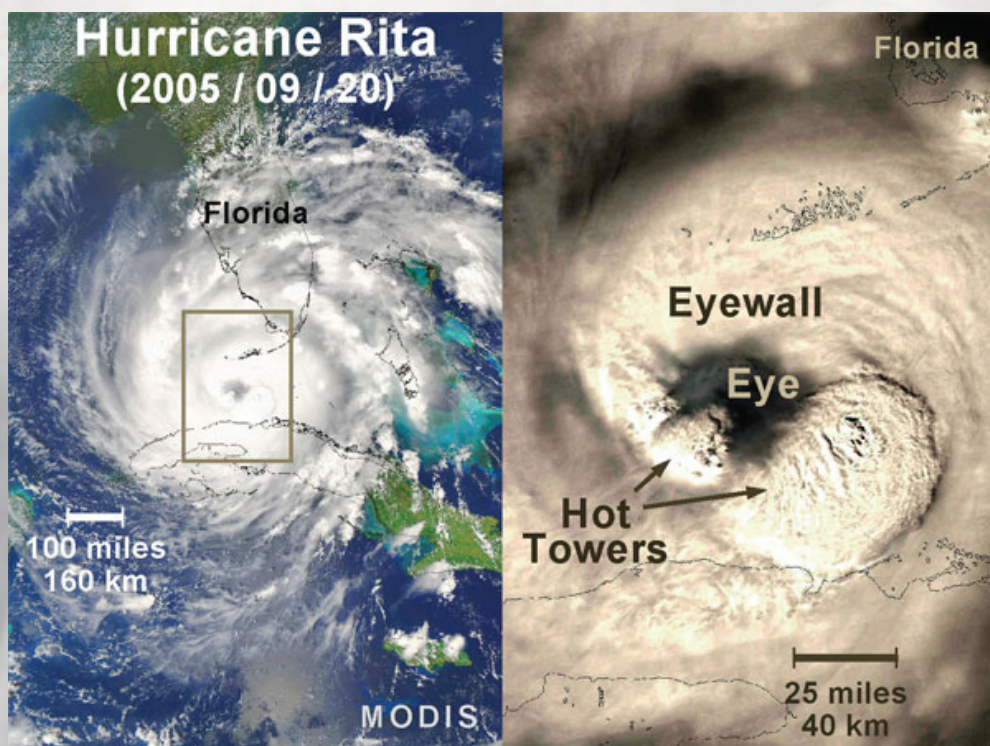
at Goddard that we hope to show reporters that NASA uses data from satellites, field missions and computer models to research hurricanes for a better understanding of them.

## NASA Goddard's Hurricane Spokespeople

Several Goddard scientists who study hurricanes are preparing to talk about all aspects of hurricanes to the media. They include Scott Braun, Jeff Halverson, Bob Adler and David Adamec. Other scientists with specialized areas of hurricane research are Owen Kelley, who concentrates on "hot towers" in hurricanes, and Gail Jackson, who studies ice crystals in hurricanes. Dot Zukor has agreed to talk to the public about Goddard's role in Earth Science and Peter Hildebrand will be presenting his research on the global water cycle.

## What's in Store for Hurricane Season 2006?

Hurricane Season in the Pacific Ocean began on May 15, so NASA's Hurricane Resource Web Page is already tracking the storms. The Atlantic Season begins June 1st, and the Public Affairs Team, NASA-TV, and visualizers are ready to bring it to you and the world. Keep your eye on the Hurricane Page at [www.nasa.gov/hurricane](http://www.nasa.gov/hurricane), and watch the news for Goddard's hurricane scientists. ■



Caption: On September 20, 2005, Hurricane Rita rapidly intensified after entering the warm waters of the Gulf of Mexico. During that intensification, the MODIS instrument on the Aqua satellite captured this image, clearly showing two hot towers in the hurricane's eyewall.

## Planets Form Even Around Dead Stars

By Christopher Wanjek

Can planet formation really be this easy? Scientists have found new planets forming in the most unlikely of places: around the burnt-out shell of a type of dead star called a pulsar.

The budding solar system was discovered with the Spitzer Space Telescope's infrared array camera, which was built by NASA Goddard Space Flight Center in Greenbelt, Md.

*If planets can form in this hostile environment, they can form just about anywhere. The discovery bodes well for finding warm, wet, rocky planets like Earth that can sustain life.*

Planets seem to be forming, quite literally, from the ashes of the exploded star. The scientists, led by Dr. Deepto Chakrabarty, from the Massachusetts Institute of Technology, identified dusty rubble orbiting the pulsar. The dust lanes are similar to those in our solar system 4.5 billion years ago when our sun was born.

This is the first time scientists have detected planet-building materials around a star that died in a fiery blast. Without a hot star to warm the emerging planets, life as we know it would be impossible. The finding highlights the fact, however, that dust plus gravity can equal rocky planet formation in a seemingly endless cycle of stellar birth and death.

"We're amazed that the planet-formation process seems to be so universal," said Chakrabarty. The result appears in the April 6 issue of Nature.

Life, it seems, goes on – even in the most hostile of environments. ■

## Proposal Opportunities

### Research Opportunities in Space and Earth Science (ROSES)

#### Solicitations

##### Ground-Based Studies in Radiation Biology

Released: 2006-03-15

Proposal Due: 2006-06-19

##### Motivating Undergraduates in Science and Technology

Released: 2006-04-21

Proposal Due: 2006-06-05

##### NASA ARMD Research Opportunities in Aeronautics NRA

Released: 2006-05-23

Proposal Due: Not Yet Released ■

## Heads Up, Technologists R&TD Call for Proposals Expected in Early June

By Lori Keeseey

The 2007 Goddard Research and Technology Development (R&TD) program solicitation is expected to be released in early June, said Goddard Chief Technologist Peter Hughes.

Schedule details are still being finalized; however, Hughes anticipates that the announcement will be released in early June and that it will include details about high-priority opportunities and associated strategic technology areas in which proposals are sought. Hughes also said the integrated call most likely would be conducted in two steps. Proposal abstracts will be due at the end of June. Technologists whose abstracts are chosen will be asked to prepare detailed proposals.

**This is the second year that GSFC has released an integrated call for research proposals. In past years, each funding program conducted its own review. By consolidating the proposals under one solicitation, program administrators could better manage the review and prioritization process and assure that awarded proposals received funding from the appropriate source and that they support one of the Center's core business areas, Hughes said.**

The change, he added, was meant to strengthen an already successful program. According to a survey conducted last fall, technologies funded under previous technology-development solicitations have made a significant impact on the amount and value of new business coming into the Center. In August, for example, the Goddard New Opportunities Office reported the award of 26 new proposals in FY05. The proposals were valued at about \$234 million over their period of performance. Sixty-five percent of the winners attributed their success to having previously received Goddard technology-development funding, which they used to advance key technologies and capabilities necessary for capturing the new business.

**"We're going to continue to focus on investments that will generate a positive return," Hughes said.**

More information about the solicitation will be available on the Goddard Technology Management Office's web site:

[gsfctechnology.gsfc.nasa.gov](http://gsfctechnology.gsfc.nasa.gov) ■



## Mark Your Calendars for June 27-29! “CELEBRATE GODDARD”

By Julia Knight

“Celebrate Goddard” events are just around the corner! In only a few short weeks we will once again dedicate three days to celebrating the Center’s accomplishments—accomplishments made possible due to the diversity of our workforce and the value we place on making everyone feel included in the work conducted at the Goddard Space Flight Center.

Mark your calendars and reserve June 27 - June 29. Plan to come out and participate in a variety of activities designed to build and help sustain a climate of respect, appreciation, and value for diversity in people, organizations and work activities. Recognizing that each of us comes to work with different experiences and backgrounds and encouraging people to be inclusive in their behavior toward others can make Goddard a great place for everyone.

The 2006 theme for “Celebrate Goddard” events will be “Goddard, As Diverse as the Universe We Explore.” You will see this theme featured on various materials throughout the year that speak to the importance of helping each employee feel valued so that his/her best work will be evidenced.

As you will see below, a variety of events have been planned to make these days special. Plan to participate in activities that will both amaze and amuse you. On June 27, come and listen to the keynote speaker, Dr. Steve Robbins, a professor, writer and consultant who has worked through and triumphed over challenges such as poverty, discrimination and the tough streets of Los Angeles. In his speeches and workshops he shares perspectives on diversity, inclusion and the power of caring through a dynamic blend of humor, stories and in-depth knowledge. The experiences he shares will inspire you and give you new insights on why we strive to be an inclusive environment.

On June 28, join your friends on the mall and learn about the many different kinds of work that is performed by various directorates and organizations at GSFC; learn about various advisory committees and GEWA clubs and how their work enriches the lives of our employees; participate in tasting a variety of delicious ethnic foods; stop by craft vendors’ tents, watch some live entertainment and much, much more. This day is designed to showcase how the diversity of our work, our lives and our cultures can all come together to make Goddard a place where everyone feels included and valued.

Again, on the mall, on June 29, some of our employees will be sharing some of the hobbies in which they engage. Also on that day, there will be competitions among the directorates in two areas: a design competition and a talent competition—both of which are designed to showcase how using the diversity we all bring to the workplace can produce better results!

Listed below is a summary of the events for “Celebrate Goddard.” Mark your calendars and join us for as many activities as possible!

### Tuesday, June 27:

10:00 a.m. ————— Kickoff by Keynote Speaker, Dr. Steve Robbins  
1:00 p.m. ————— Workshop conducted by Dr. Robbins

### Wednesday, June 28:

10:00 a.m. to 2:00 p.m. — Exhibits on the Mall

### Thursday, June 29:

10:00 a.m. to 2:00 p.m. — Hobbies and Hot Dogs on the Mall and the Goddard Dessert Taste-off Contest

11:00 a.m. ————— Directorate Diversity Competition  
Design Track

1:00 p.m. ————— Directorate Diversity Competition  
Talent Track ■



Caption: Celebrate Goddard Day 2005.

Photo credit: TISB

## And The Award Goes To...

By Susan Hendrix

NASA employees may not qualify for an Emmy or Oscar, but we are privy to something very special – the Telly Awards.

What is a 'Telly' you ask? The Telly, now in its 27th year, is a prestigious award that recognizes outstanding video and film productions, as well as non-network TV programming. Each entry competes against a very high standard of excellence, with a 'Silver Telly' being equal to a gold medal in the Olympics.

For Goddard, the Telly represents an opportunity to receive national recognition for our non-commercial educational and public outreach productions.

This year, Goddard producer Mike McClare won three Silver Tellys. Two are in the Government Relations and Use of Animation categories for his 'Beyond Einstein' piece, 13-minute high-definition video with jaw-dropping animation and interviews with leading scientists which was featured last fall at a National Air and Space Museum's IMAX theatre. The piece is available on DVD and highlights three major space science quests: black holes, the Big Bang, and dark energy.

McClare won another Silver Telly in the Education category for his 'Building the Coolest X-Ray Satellite: Astro-E2' piece, which gave high school students an insider's look at the ups and downs of satellite design and development. Along the way they received a crash course in X-ray astronomy, spectroscopy, cryogenics, working in a cleanroom, and X-ray telescope construction.

McClare also won a Bronze Telly in the Use of Animation category for a piece called, 'It's All in The Data,' a high-definition presentation created especially for visitors to the Center for our 2005 Community Day event. "The multi-media team at Goddard is one of the most talented and creative groups I've ever worked with, McClare said. "Earning this many awards speaks to the talent and professional standards of our group."

Goddard producer Liz Smith won a Silver Telly for 'Swift: A Year in the Life,' a retrospective 5-minute video created to mark the one-year anniversary of the Swift launch for the science team. "Winning a Telly is an amazing honor for me," said Smith, who came to the Center two years ago as a fellowship producer and was recently converted to a full-time permanent position as a Goddard TV producer. "It's incredibly satisfying to work with people who achieve such high standards and produce such high-quality videos every day."

Smith also captured a Bronze Telly in the Editing category for her 'Top Stories: 2004-2005' piece; an 8-minute video included in the Beyond Einstein DVD featuring 'Voyager Leaves the Solar System; Swift Launches

and Discoveries; Black Hole Science, and Hubble Space Telescope 15th Anniversary.'

Goddard science writer Michael Starobin and Goddard video editor Rich Melnick won Silver Tellys in the Government Relations and Editing categories for a 'Planet Earth' documentary. According to Melnick, during the final days of editing he got very little rest, spending three nights sleeping on the edit room floor. "It was an exhausting job, but it was one of those high profile videos that I knew would make our TV production group shine," Melnick remarked. "Winning a Telly made all of those painstaking hours worth it, knowing that this edit job ranks among the best in the industry."



Photo credit: NASA

Caption: Gold Telly.

Goddard producer Erica Drezek received a Silver Telly for her 'SDO: Solar Dynamic Observatory' piece. In order to meet the deadline for this piece, Drezek skipped creating a script and instead interviewed scientists, using their voices to create the story. Together with Goddard's unique visualizations, animations, video, and fast-paced music, viewers are taken on an exciting journey to the sun. About her win, Drezek said, "I was surprised and pleased to hear the good news, but it wouldn't have been possible without the help of Fred Kemman the editor and Barbara Lambert from the SDO Project."

Goddard's 'Tour of the Cyrosphere: Earth's Frozen Assets' video won a Bronze Telly for Sound/Sound Design, and a Silver for Government Relations. Starobin created the original sound track (music), co-wrote the piece and provided narration; Mike Velle of Goddard provided audio engineering, mixing the sounds and vocals together; and our on-site Scientific Visualization Studio developed all the visuals. Cyrosphere was presented at the fall 2005 American Geophysical Union meeting in San Francisco.

Starobin also received a Silver Telly for 'Planet Earth,' an original short film edited by Melnick which can either stand alone, or be narrated live in front of an audience. "In Planet Earth, we were able to convey Earth as a living, breathing place that's just as romantic as distant planets in the universe," said Starobin.

Our awardees should feel very proud as their productions face some stiff competition. Past winners include such prestigious production groups as A&E, The History Channel, DreamWorks and the Discovery Channel.

To view the award winning 'Cyrosphere' video, as well as other NASA Goddard videos, go to:

[http://www.nasa.gov/centers/goddard/multimedia/gtv\\_top\\_videos.html](http://www.nasa.gov/centers/goddard/multimedia/gtv_top_videos.html)

To read more about the Telly Awards, visit:

<http://www.tellyawards.com/> ■

# Former Lab Assistant Promoted To Lab Chief

By Dwayne Washington and Susan Hendrix



Photo credit: Chris Gunn

Caption: Jonathan Gardner.

Jonathan Gardner, the Deputy Senior Project Scientist for the James Webb Space Telescope (JWST), was recently named Lab Chief for the Observational Cosmology Lab, Code 665. He replaces Lou Kaluzienski, who has returned to NASA headquarters after completing a one year detail at Goddard.

The Goshen, Indiana, native began visiting Goddard in the summer of 1985 as a young laboratory assistant while studying astronomy at Harvard. Following graduation, Gardner spent six years at the University of Hawaii earning his Masters and Doctorate degrees. To complete his graduate studies Gardner spent more than 100 frigid nights on the summit of Mauna Kea Observatory. At the summit he studied cosmology and the evolution of galaxies using infrared detectors technology that was later used in the Near-Infrared Camera and Multi-Object Spectrometer (NICMOS) instrument onboard the Hubble Space Telescope.

In 1992, Dr. Gardner won a NATO fellowship to pursue his research at Durham University in the United Kingdom. He returned to Goddard in 1996 just in time to see astronauts install NICMOS and the Space Telescope Imaging Spectrograph (STIS) into Hubble. Gardner's early work focused on the STIS experiment as a contractor before transitioning to a broader range of duties as a civil servant astrophysicist. He has studied early galaxy formation and plays a key role in the proposed NASA-Department of Energy Joint Dark Energy Mission.

According to Gardner, these are challenging yet exciting times for the scientific community. "We Now Know", are three words you hear a lot from

scientists these days because so much is happening so fast," Gardner said. "The list of "We Now Know" discoveries includes finding more than 100 planets orbiting other stars and the revelation that 95 percent of the universe is either dark matter or dark energy. These results have been realized because of advances in technology."

Gardner attributes technology as key to the rapid increase in so many new discoveries. "When you get those technological advantages it allows you make new discoveries on a regular basis and that's what happening here. At Goddard it is the collaboration between scientist and engineers that help us develop new technologies and allow us to answer the "Now We Know" questions," Gardner said. "I am most excited about heading this laboratory to enable these discoveries."

In addition to JWST, the Lab's gemstone is the Wilkinson Microwave Anisotropy Probe (WMAP) mission, which recently found evidence that the Universe underwent a period of rapid inflationary expansion in the first billionth of a second after the Big Bang. New microwave detectors are under development to build upon the Cosmic Background Explorer (COBE)-WMAP legacy.

"I'm looking forward to working with the members of the Lab to understand the history of the universe from the Big Bang through to the formation of galaxies like our own Milky Way," said Gardner. "Our efforts in the next few years will be to move JWST through the construction, integration and test phase, and to develop mission concepts for Explorers and Joint Dark Energy Mission (JDEM). Since a large observatory can take 20 years to develop, it is also not too early to start thinking about what will follow JWST."

When not at work Gardner and his wife are busy raising three children ages 1, 5 and 7. A typical vacation for the Gardner family includes a camping trip or a visit to his in-laws in England. He also enjoys playing the guitar in his spare time. ■

## Did You Know?

### Polycrystalline alumina:

The ceramic material in tooth-colored brackets, was developed from research to track heat-seeking missiles.

**Employee Spotlight:**

**Valerie Mackritis**

By Amy Pruett

Valerie Mackritis, a NASA Employee since 2003, uses diversity to make a difference. A resource analyst for the Airborne Science Office at Wallops Flight Facility, Mackritis dedicates her free time to raising awareness about diversity at Wallops as well as in the center's local community. Her tireless efforts have inspired a greater understanding and appreciation of differences by Wallops' workforce to happier, increasingly well-behaved eighth graders at Arcadia Middle School in Parksley, Va. Her membership in key committees such as Wallops' Diversity Committee, Character Counts and Woman at Wallops provide her the means to make an immense impact.

Mackritis is actively involved in several Wallops organizations that stir the public's interest in diversity and increase an understanding of differences, such as race, religion, and sexual orientation. A member of the Diversity Working Committee at Wallops, she designed and helped implement diversity training for each of Wallops' codes.

**“The goal of the presentations we give is to bring awareness that people are different and embrace the culture for the benefit of the Wallops workforce,” says Mackritis.**

In addition to her influence at Wallops, she mentors students in Wallops' local community. For instance, through Character Counts, a spin-off organization from Woman at Wallops, she has made an impact. In Character Counts, volunteers such as Mackritis visit a community school, this year Arcadia Middle School in Parksley, VA, mentoring and supporting eighth grade students. Each week, volunteers from NASA Wallops Island create a lesson plan involving games, activities and subject matter that inspire discussion about the six pillars of character: trustworthiness, respect, responsibility, fairness, caring and citizenship. In addition, the volunteers teach the students life skills, such as the benefit of keeping a journal. Mackritis volunteers out of a desire to help shape the next generation into caring and understanding individuals, practicing each of the six pillars of characters regularly.



**“It is important that teenagers realize the value in volunteering, says Mackritis. “It is not always how smart you are that rewards individuals, but also a passion for reaching out to the community that can be the real gift.”**

The weekly sessions in the Character Counts program for the 2005-2006 school year lasted from September through May and behavior statistics marked a drastic improvement in the eighth grade students. In fact, volunteers such as Mackritis have made such an enormous positive impression that the principal of Arcadia Middle School has asked the organization to expand the

Character Counts mentoring program to include additional JR High and High School students next year.

Mackritis attributes her passion for diversity to be rooted in her background. Twenty years in the military, eight years of active duty in the Air Force and 12 years in the Air National Guard, and living in three countries and numerous states have presented Mackritis a personal look at many diverse situations and experiences.

Mackritis is the Mother of two teenage children Ashley and Michael-Noah, who attend Salisbury Christian School, Salisbury MD.

Photo credit: Courtesy of Valerie Mackritis