

## The Past, Present and Future with Mr. Diaz

By Dewayne Washington

As 2003 drew to a close, Center Director Al Diaz sat down with Goddard News to reflect on the past year and look ahead to 2004. About to celebrate his 6th anniversary as Director of the Goddard Space Flight Center, Mr. Diaz talked about the formula he believes helps NASA maintain its reputation as one of the best places to work in the Federal government. And because balance is among the Center's values, we asked Mr. Diaz what he likes to do when he is not working. Below, is the transcript of the interview.

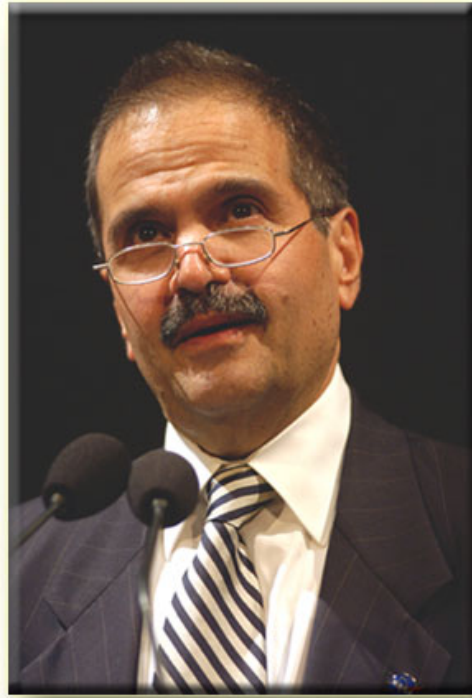


Photo by Chris Gunn/293

Center Director, Al Diaz

### How do you feel about the current state of Goddard?

"I feel really good about where we are. We've spent the last six years together - January is my sixth anniversary - and I think we have grown to understand each other and work comfortably together. I am really pleased to see the way the whole team has reacted in the past several months, especially to the messages coming out of the work that I have done on the CAIB Report. I actually think these past couple of months have been a test of our ability to work together. But I think we are doing well and I can see some evidence now that in fact people do understand each other and me, and that we are working together to make Goddard an even better place to work. I continue to feel that Goddard is what I call an 'inside out' organization. We need to focus on what is important to the people *inside* the organization, and I will continue to focus on things that are important to people — exciting work, getting the resources that they need to be a success, and valued centered management. I continue to feel that those three things are the keys to making Goddard a great place to work, and that is the secret to success here."

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To understand and protect our home planet

\*To explore the Universe and search for life

\*To inspire the next generation of explorers as only NASA can

For further details of the NASA mission, go to:

<http://www.nasa.gov/bios/vision.html>

## Center Director Speaks (cont'd)

### What is your proudest moment of 2003?

“There were actually two. One was the press conference where the MAP results were discussed, because I felt for a lot of people here at Goddard that that press conference was the culmination of a big part of their career. To have someone of the stature of John Bahcall not only recognize that event with his presence, but also to also hear him say that the moment he heard the MAP results is a moment he will remember for the rest of his life, that’s really important. It made me feel very proud. The other moment was the supervisor’s meeting that we had most recently dealing with the CAIB results. I got a sense at that meeting that we connected in a way that I have always wanted to connect, and I believed that we could. There was real communication going on and there was honest feedback coming from a group of people who couldn’t be more talented. If we take this talented group of people and if we dedicate ourselves to using the results of the CAIB report as a mechanism to improve, then I believe we will have created a formula to make Goddard an even better organization. I felt really proud of the fact that we had worked so hard to get to that point, and to have it come together the way that it did was really important.”

### What do you look forward to in 2004?

“First there is the Aura mission, which marks the completion of NASA’s commitment to launch a series of earth observatories. Aura will provide tremendous information, as has been the case with the Terra, Aqua and the ICESat missions before it. So, I think that Aura’s launch will mark a milestone that I am very anxious to see completed. The other is the publication, early in the year, of the final report that I was asked to work on by the administrator. What I am really excited about is the opportunity to continue the

dialog that we started with the first supervisor’s meeting and using the CAIB Report and the outcome of the Safety and Mission Success Week as a basis for a set of actions during the course of this year. This will confirm to people that we intend to learn from the CAIB Report and to make NASA an even better place to work.”

### What do you like to do when you are not working?

“I think it is pretty widely known that I enjoy good food, good wine and travel. So, I’m looking forward to taking an extended vacation in 2004, and spending time in Italy, which is one of the world’s



Above, Mr. Diaz speaks to students at a local school.

Mr. Diaz looks on as NASA’s Associate Administrator of Education, Dr. Adena Williams Loston views images through special glasses in Scientific Visualization Lab.

centers of good wine and food. That’s what I like to do, spend time with my wife, travel, eat good food and drink wine.”

### A final word from the Center Director.

“I hope that Goddard employees are as proud to work here as I am. I also hope that they recognize that a good organization, an excellent organization, is one in which we all acknowledge that there are going to be issues, but that we have respect for each other’s opinions. Furthermore, when issues are raised, the people who are in position to do something about those issues recognize it is their responsibility to act. I think if we all believe that we are in that kind of organization then we will be just fine.” ■



Mr. Diaz looks on as child reads about Hubble in *Touch the Universe* braille book .

Photos by Chris Gunn/293



# GSFC in 2003

Tomeika Blackwell/Jason Townsend

Within the last year, the NASA Family has seen both triumph and sorrow. With both some of our brightest hours and darkest days, 2003 proved to be another incredible year for the Goddard Space Flight Center. Starting with a bang, Goddard launched the Ice, Cloud, and Land Elevation Satellite (ICESat) and the Cosmic Hot Interstellar Spectrometer (CHIPS) satellites on January 11, 2003 from the Vandenberg Air Force Base, California. Using the Geoscience Laser Altimeter System (GLAS), ICESat is measuring the surface elevations of the large ice sheets covering the polar regions of Earth.



Expendable launch of ICESat and CHIPSat.

Courtney Stadd, NASA Chief of Staff also visited Goddard for a Freedom To Manage Town Hall meeting with Goddard employees during January. On January 16, 2003 the NASA Family had another triumph to celebrate with the launching of STS-107, Space Shuttle Columbia and a Goddard Payload, Fast Reaction Experiments Enabling Science (FREESTAR). Upon Columbia's return to Earth, the NASA Family suffered the tragic loss of seven bright stars. For the Goddard FREESTAR team who worked closely with the crewmembers of STS-107, the loss hit home.



STS-107 Crew

Memorial services were held at Johnson Space Center and Sean O'Keefe, NASA Administrator, as well as President George W. Bush reflected upon the bravery of those who journey out of our world.

February also provided new scientific discoveries for scientists using the Wilkinson Microwave Anisotropy Probe (WMAP) when they took a twelve month long survey of the sky capturing the afterglow of the big bang from the cosmic microwave background. This incredible achievement was presented during one of NASA's Space Science Updates and received press coverage from around the world. Goddard also was part of collaborative effort to resolve a faulty valve control on one of TDRS-1's fuel tanks.

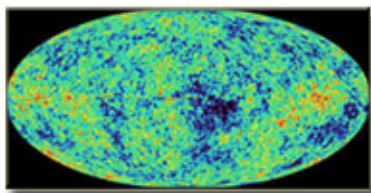


Image of full-sky map of the oldest light in the universe: a "baby picture" of the universe.

The CHIPS satellite entered into its second month of operations in March allowing scientists to study the birthplace of solar systems. Goddard scientists presented also new scientific discoveries in March during the annual American Astronomical Society (AAS), including observations from the Chandra X-Ray Observatory depicting the rich density of galaxies. Goddard scientists also presented key

features that make intermediate-mass black holes different from other black holes. The Goddard Library in March was also named the Federal Library of the Year for 2002 when compared to over 1,000 other large federal libraries.



Children of the 'Inspire the Next Generation Day' were intrigued with Astronaut Leland Melvin's participation.

March concluded with the High-Energy Transient Explorer (HETE) detecting one of the brightest and closest gamma ray bursts to date. Another milestone passed in April with the 20th anniversary of the original TDRS-1 satellite. And Goddard astronomer Fred Espenak was honored with his name being given to an asteroid for his contributions to astronomical calculations. Goddard also

played host to many student activities during the 'Inspire the Next Generation' Day on April 24, 2003.

Speaking of students, Goddard employees pitched in with local teams of high school students to build and operate robots for the DC Regional 'BotBall' held on May 3, 2003 at the University of Maryland. May also brought the opening of the Galaxy Evolution Explorer's (GALEX) telescope cover, part of the Explorers program managed by Goddard. A team of Goddard researchers also concluded that pollution has an effect on global warming by looking at soot in the atmosphere.



Robot attempting to lift item.

Goddard scientists discovered what is thought to be the third closest star to the sun, while Wallops Flight Facility broke ground on a new payload processing facility. On May 4, 2003 Goddard celebrated another anniversary of one spectacular year looking at Earth via Aqua. May marked history and another celebration as an innovative joint collaboration between NASA, EPA, Maryland's Prince George's County and Dallas-based Toro Energy, Inc. put NASA Goddard



Lft: Energy Manager for Goddard, Barry Green, former Administrator of EPA, Honorable Christie Whitman, Center Director, Al Diaz and NASA Administrator, Sean

Space Flight Center as the first facility using methane gas from a nearby landfill to meet energy needs and reduce pollution.

At the start of the summer, Goddard opened its arms to a new crop of summer internships. Frank Cepollina, who pioneered satellite-servicing techniques to correct

**Continued on page 4**



Mr. Cepollina at induction into Inventors Hall of Fame ceremony.

Hubble's bad vision, was inducted into the Inventors Hall of Fame. Goddard's Solar Radiation and Climate Experiment (SORCE) started providing solar radiation predictions for Earth, while on a beautiful, sunny day, Goddard had a great time at this year's Celebrate Goddard Festival with local cuisine and entertainment.

During the rainy month of June, Goddard scientists helped prove that the Earth is growing greener with more vegetation. Goddard employees also took time out of their lives to visit and participate in a "Blast Off to Reading" campaign with the DC Public Libraries for the summer months. Wallops launched four rockets that created beautiful colors in the sky to help scientists better understand cloud formation. The Sun-Earth Connection programs studied coronal mass ejections during a busy summer of solar weather. Summer educational programs were in full swing working with local students to 'inspire the next generation.'



Dillard Menchan, Chief Equal Opportunity Programs Office speaking at DC Public Library.

In July, scientists were able to get an intimate look at the sun due to a telescope and camera launched aboard a

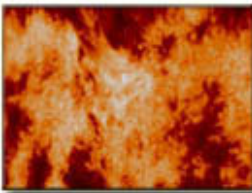


Image of active area in lower layer of Sun's atmosphere.

sounding rocket. The snap shots will help researchers learned more about how the sun operates along with how the sun's outer layer heats up to over one million degrees Celsius. The June 12, 2002 expedition captured the images three times better than any previous photographs. NASA Administrator Sean O'Keefe also visited Goddard and held a NASA Update attended by many Goddard employees.

During the waning summer weeks, the Far Ultraviolet Spectroscopic Explorer (FUSE) received a triple brain transplant with the successful implementation of new software on three computers flying aboard. Two Goddard 'eyes in the sky,' Aqua and Terra, helped firefighters throughout much of the western United States keep better track of wildfires below using infrared sensors. Additional, data taken from the Earth Probe/Total Ozone Mapping Spectrometer (TOMS) spacecraft helped to improve winter storm track modeling.



Image from animation of the jet (white plume) breaking through the outer shell of the star, about nine seconds after its creation.

Data from the now-deceased Compton Gamma Ray Observatory (C-GRO) helped to prove that ultra-high energy cosmic rays generate the most powerful particles known. Scientists from the TRMM project also helped to prove that

pacific rains generated by El Nino could create adverse weather around the planet. Also the Reuven Ramaty High Energy Solar Spectroscopic Imager (RHESSI) took some surprising photos of the sun's explosions that showed in great detail how that process works.



Lft, Ralph Roe, special assistant for managing implementation of the NESC and Langley Director Roy D. Bridges, Jr., development of the NESC.

In September it was announced that NASA would implement new safety measures. The NASA Engineering and Safety Center (NESC) will establish independent technical expertise to access dilemmas and supplement safety and engineering operations for agency programs and operations. The new safety efforts were sparked by the Columbia tragedy, which disclosed the need for NASA to improve its ability to verify

engineering and safety standards; share technical information, practices and talent; and independently evaluate the ability to achieve mission success.

Then along came a storm called Isabel. Temporary closure of the Greenbelt and Wallops Center, allowing everyone to weather the storm with only minor damage. Hurricane Isabel also gave Goddard scientists a great opportunity to study the heat engines that drive hurricanes using the TRMM satellite.

A new camera developed by Goddard beamed back first shots aboard the Space Infrared Telescope Facility (SIRTF). SeaWiFS also helped us watch the breaking off of one of the largest icebergs ever recorded, while Thermosphere, Ionosphere, Mesosphere, Energetics and Dynamics (TIMED) mission will be able to keep recording data for another three years with NASA's new program extension. ICESat's first results showed us accurate measurements of Ice, Clouds and Land elevations. Researchers also issued a cautionary warning that recently observed changes in the size of the polar ice caps may be a signal that Earth's climate is changing.

November showcased the importance of cultivating a One NASA culture. This concept focuses on a unified strategic plan, a strong commitment to teamwork, tools, and capabilities for greater collaboration across the agency. On November 19, NASA provided an all day workshop that entailed addresses from key NASA officials who reflected on ways to expand the knowledge and understanding of NASA's vision and mission. Scientists also announced that the Voyager 1 spacecraft would soon make history as the first human made object to leave our solar system and travel into



William Readdy, Associate Administrator for the Office of Space Flight speaks at Goddard's One NASA events.

interstellar space. Rounding out the year, December provided a chance for Goddard to help prepare NASA for a new year of science and technological achievements.

For more information on any of these events, please visit the Goddard News archive at: <http://www.gsfc.nasa.gov/gsf/gnews/gnews.htm>. ■



# Shuttle Team Continues Return to Flight Activities

By Ed Campion

As 2004 begins, NASA and contractor employees around the country are hard at work addressing a number of challenges in their efforts to return the Space Shuttle system to flight status.

While an earliest launch period of September 12 – October 15, 2004 has been established, managers at every level continue to stress that safety, not schedule, will be the top priority as technical and vehicle processing issues are addressed. In status briefings to the news media, Shuttle managers have stated that in their return to flight effort, a number of “bumps in the road” will be encountered but managers believe the mid-September to mid-October target launch date is still doable as of right now.

In order to keep all options open, the team has been preparing both Space Shuttle Atlantis and Space Shuttle Discovery such that either vehicle could be the first to fly. While Atlantis is the prime vehicle for the STS-114 mission, the flight could be switched to Discovery in the event a problem is encountered on Atlantis. A decision on the orbiter that will fly the STS-114 mission is expected to be made early in 2004.

One of the key areas in preparing for the return to flight – development of a Thermal Protection System (TPS) repair – is progressing very well. The belief is that the new tile repair system can be ready in time to support a September/October launch. The activities to develop a repair technique for the Reinforced Carbon Carbon (RCC) material are progressing more slowly and is a more challenging development activity.



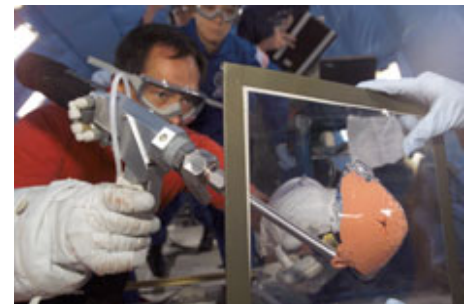
Astronaut Scott E. Parazynski uses an air-bearing floor to approximate some of the conditions of an in-space extravehicular activity (EVA) that might be called upon to repair damaged thermal tiles on a space shuttle.

A flight certification review was conducted last month with the objective of identifying the concepts NASA intends to continue to develop and certify for the return to flight. Test objectives of methods both for tile and RCC repair will be conducted as part of the STS-114 mission. As part of the RCC repair activities, teams, at three field centers, are currently focused on potential repair techniques. Langley Research Center employees are looking at overwrap concepts for repair while a Johnson Space Center team studies plug concepts for repair and a group at Marshall Space Flight Center is examining filled-wing concepts.

As part of the mission planning process, the option of using the International Space Station (ISS) as a “safe haven” should a problem arise while a Shuttle is in orbit is being developed. Current plans call for another Shuttle vehicle to be positioned and available for launch within the “ISS Safe Haven” window.

Current thinking is the maximum “safe haven” window is approximately 86 days. That is believed to be the amount of time a crew from a disabled shuttle could remain aboard the ISS while awaiting the arrival of a second shuttle to bring them home.

Shuttle managers intend to conduct news conferences on a regular basis to provide the status and any new developments in the return to flight effort. ■



Astronaut Carlos I. Noriega, onboard a KC-135 zero-gravity aircraft, injects material into a special clear damage mold to observe flow characteristics of the material in a weightless environment.

# NASA Goddard Makes a Splash at the Annual Fall Meeting of the American Geophysical Union

By Mike Bettwy and Rob Gutro

NASA Goddard researchers presented Earth Science findings on various topics at the American Geophysical Union annual fall meeting at the Moscone Convention Center in San Francisco on December 8-12, 2003. The 5 NASA related press conferences included:

## A Season in the Life of the Antarctic Ozone Hole

Speakers discussed how NASA's Total Ozone Mapping Spectrometer (TOMS) instruments have been looking at ozone and making daily maps of the ozone content of the atmosphere. TOMS data has shown the evolution of the 'ozone hole' since 1979. This instrument was an essential factor in establishing international agreements that led to the banning of ozone destroying chlorofluorocarbons. **Richard Stolarski, Paul Newman, and Pawan K Bhartia** all of NASA Goddard Space Flight Center were panelists at this press conference. For the story, see: <http://www.gsfc.nasa.gov/topstory/2003/1208toms.html>

## Icesat Captures Earth in 3-D

NASA's Ice, Cloud and land Elevation Satellite (ICESat) is sending home spectacular 3-D views of Earth's polar ice sheets, clouds, mountains, forestlands and even fires, all to help scientists understand how our changing climate affects life on Earth. Goddard scientist **James Spinhirne** said "the amount and coverage of heavy dust and pollution loading in many regions of the Earth that we are seeing in the initial ICESat data are unexpected," said James Spinhirne, principal atmospheric scientist for ICESat at NASA Goddard. These include the rivers of dust from the Sahara desert, massive dust storms, and large-scale smoke from burning vegetation. The observations tie smoke, dust and clouds directly to winds and global transport. **Jay Zwally** and James Spinhirne both of NASA Goddard were two of the four panelists at the press conference. For the story, see: <http://www.gsfc.nasa.gov/topstory/2003/1209icesat.html>

## Earth's Collapsing Dipole

Earth's dipole field has decreased over the past 150 years at a rate greater than if flow in the outer core were to suddenly stop. The trend has far-reaching implications, ranging from the potential for more extensive radiation damage to satellites, to the possibility the field is heading toward reversal. Atmospheric changes are known to result from variations in solar activity, and thus should be expected if the dipole decrease persists. Discussions included what would happen to the atmosphere if there were an extremely large solar proton event caused by a large-scale solar storm during the time when Earth's magnetic field is low. **Charles Jackman** represented NASA Goddard on the panel of this press conference.

## Earth's Climate Over The Past Millennium

Using the perspective of the past few millennia, speakers including **Drew Shindell** of NASA's Goddard Institute for Space Studies, discussed the latest research involving climate reconstructions and different models. Discussions included how researchers use a climate model that account for solar radiation changes, volcanic eruptions, and natural internal variability to arrive at a more accurate look at Earth's changing climate. For the full story, please see: <http://www.gsfc.nasa.gov/topstory/2003/1211millenium.html>

## How Urbanization is Impacting Climate

Scientists estimate by 2025, 60 percent of the world's population will live in cities. The urban environment can impact several aspects of the natural Earth system. This press conference will highlight some of the impact of urbanization on climate change including temperature changes, rainfall modification, and aerosol constituents. **Marshall Shepherd** and **Michael King** of NASA GSFC presented these and other major findings on December 11. They also convened a special session, organized by Shepherd and Dr. Menglin Jin of the University of Maryland, detailing these results on Human-Induced Climate Variations Linked to Urbanization: From Observations to Modeling. For the full story, please see:

<http://www.gsfc.nasa.gov/topstory/2003/1211urban.html>

Additional NASA press releases on findings were issued from various NASA centers. They include:

## NASA Learning To Monitor Coral Reef Health From The Sky

Sometimes called the "bellwether of the seas," coral reefs can give first indications of marine ecosystem health. Liane Guild, a scientist at NASA Ames Research Center is the principal investigator in a collaborative project to develop a method to remotely sense coral health. "We're looking into how you could remotely detect coral reef health using aircraft with visible light sensors," Guild said. "First, we have to look at the coral close up, underwater, to see what spectral reflectance the sensor picks up from diseased, stressed and healthy coral."

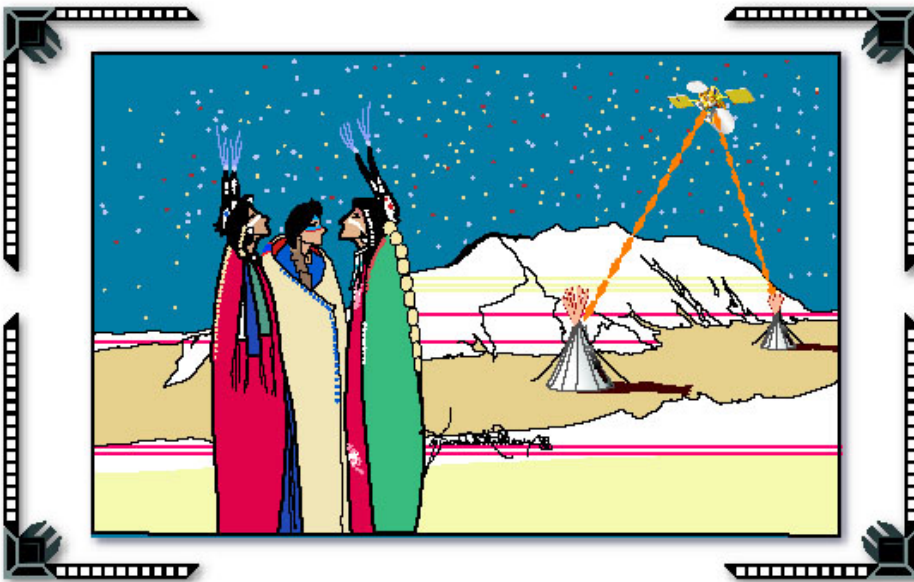
## NASA Scientists Discover Spring Thaw Makes a Difference

Using a suite of microwave remote sensing instruments aboard satellites, scientists at NASA's Jet Propulsion Laboratory (JPL), Pasadena, Calif., and the University of Montana, Missoula, have observed a recent trend of earlier thawing across the northern high latitudes. "Frozen soil can store carbon for hundreds to thousands of years," said lead author Dr. Kyle McDonald of JPL, "but when the permafrost thaws and begins to dry out, it releases the carbon back into the atmosphere." The concern is that eventually carbon released from the soil will prevail over the amount being taken in by growing plants. Carbon dioxide levels in the atmosphere would increase at an accelerated rate, fostering even greater warming of the region and affecting global climate.

And one NASA Feature Story was generated on the Goddard Website: **NASA Satellites Watch World's Cities Grow**

Researchers used NASA's Landsat satellite to measure and analyze urban growth among a global cross-section of 30 mid-sized cities during the 1990s, according to a two-part study presented at the Fall American Geophysical Union Meeting in San Francisco. Preliminary results from Boston University research assistant and lead author of the NASA-funded study, Annemarie Schneider, show that some cities in the sample, including Atlanta, Georgia, Calgary, Canada, and Curitiba, Brazil, grew in area by as much as 25 percent from 1990 to 2000. More importantly, this kind of global satellite-derived analysis allows researchers to compare areas and determine spatial trends in how cities have developed. For the full story, please see: <http://www.gsfc.nasa.gov/feature/2003/1212globalcities.html> ■





## Goddard Represented at 2004 AGU Meeting Recognized for Native American Outreach

By Dewayne Washington

In its year of accomplishments Goddard has also emerged as a premier Center in its outreach efforts to the Native American community. During the 2003 summer session Goddard hosted 19 Native Americans. Several weeks ago Goddard representatives were selected to present interaction and outreach efforts with Native American and Tribal Colleges as well as present the works of other organizations and Tribal Colleges at the 2003 American Geophysical Union Fall (AGU) Meeting, another first for Goddard.

For the fall AGU meeting, Goddard staff members from the Equal Opportunity Employment Office, **Wanda David**, Native American Program Manager and **Janie Nail** (EduTech Ltd.) were approved to convene two sessions. These sessions included a panel discussion featuring Native students, Presidents (Turtle Mountain Community College) and faculty from Tribal Colleges and universities, The American Indian Society of Engineers and Scientist (AISES), NASA scientists, and others to offer insights into successful interactions and partnerships relevant to Earth Science from the American Indian perspective.

Following a traditional Native prayer by Jhon Goes In Center, (Lakota) Sinte Gleska University, David gave opening

remarks to begin the first session. "We want to showcase NASA's involvement with Native America and Tribal Colleges as the premier Earth Science NASA Center," said David.

"We want to focus on the other partnerships outside of NASA with Native America and Tribal Colleges, to gain a better understanding to what others are doing that may help NASA expand its participation and/or partner with them. We also want to facilitate future interactions and partnership with Native America and to partner, where appropriate, with other organizations in relation to involving Native America and Tribal Colleges as it relates to NASA's Earth Science endeavors," said David.

Following her remarks, a representative from the American Indian Higher Education Consortium (AIHEC) gave a brief history of the founding and continuing development of the Tribal College movement. Begun in 1968, there are now 35 Tribal colleges with a student population at about 30,000. The goal of AIHEC is to build a framework of strategic partnerships, resources, and tools that will help TCUs and their communities create locally based economic and social opportunities.

Mary Anne Stoutsenberger from NASA headquarters spoke of Goddard's outstanding efforts in the past year and NASA's desire to increase funding to TCUs. "Funding for Tribal colleges has really increased but I feel we really need to do even more," insisted Stoutsenberger.

There was a presentation by Catherine Hawks about what the University of Alaska, Fairbanks, is doing to encourage involvement of Alaska Natives in geoscience careers. "We are not a Tribal college but we are striving to increase the Native American population at our school," said Hawks. "Our emphasis is on land management."

There were other representatives such as the North Dakota Association of Tribal Colleges who spoke of the continued growth of successful programs designed to increase Native American involvement. Dr. Nancy Maynard spoke of her direct involvement in the Tribal College Student Internships program at Goddard as Native American involvement in the Climate Change Workshops. Phillip Huebner, Arizona State University talked about the school's successful mentoring program and partnering with industry.

Probably the most moving presentation was given by Jhon Goes In Center, who spoke on GIS applications on tribal lands. He talked of the elders desire for Native Americans to improve themselves in the areas of science and then return to the reservation to help others help themselves.

"This gathering provided the forum to gain greater insight into the myriad of programs, projects, and initiatives related to Earth Science and other endeavors involving Native American and Tribal Colleges as well as to foster old and develop new relationships as I knew it would," said David. "I am very happy and proud of what we have been able to accomplish thus far but I also feel there is so much more to do."

With the invitation to Goddard, the AGU is taking a very active role in encouraging its membership and the science communities it serves to engage underrepresented minority populations for greater inclusion in their programs and outreach opportunities.

David said they are already preparing for the 2004 meeting and anticipate such a gathering to become an annual event. ■

## In the Safety Corner

### Getting Ready for Cold Weather

As consumers prepare for winter's first cold spell, many are considering the use of supplemental heating appliances such as portable heaters in an effort to avoid high heating bills. These systems can help lower heating costs but can be very dangerous if installed or used improperly.

Supplemental home heating appliances are estimated to be associated with 105,800 residential fires, killing an estimated 600 people, in 1987. In addition, thousands of injuries from contact burns and about 100 deaths from carbon monoxide poisoning occur every year.

The U.S. Consumer Product Safety Commission (CPSC) is anxious to alert consumers about the potential dangers posed by supplemental heating units. To that end, the Commission has a few tips for using these units safely.

Here are some general safety tips:

- Keep children and pets away from supplementary heating appliances.
- Never use a space heater overnight in the room where you are sleeping. It should never be left unattended.
- Maintain proper ventilation in the room where the fuel-fired heater is used. Place heaters at least three feet away from objects such as bedding, furniture, draperies, and other combustibles.
- Always follow the manufacturer's instructions in installing, operating, and maintaining your heating appliance.
- Keep a properly functioning smoke detector on each level of your home and close to sleeping areas.

### Electric Heaters

Portable electric heaters, while seemingly harmless, were associated with 2,800 fires and 80 deaths in 1987. Do not use these heaters as a substitute for central heating. They are designed for temporary heating only. Do not use them while sleeping or when unattended. Electric heaters should not be located in heavily traveled areas or areas where children might touch them. Avoid the use of an extension cord with an electric heater.

If an extension cord must be used, purchase a cord with electrical ratings (wattage, current) at least the same or greater than those of the heater with which it will be used. Caution, most extension cords found in the home do not have electrical ratings suitable for portable heaters. If you must use an extension cord, it must be marked #14AWG or #12AWG. Finally, electric heaters should not be used near water because of the possibility of shock or electrocution.

The CPSC reminds consumers this heating season of the need for accident awareness. With a few precautionary steps, you can reduce the chances of an accident. Read instruction manuals and take time to get acquainted with the operation of your heating unit before starting it up. Let's make this winter an especially safe heating season. For additional information: [www.cpsc.org](http://www.cpsc.org)



## GEWA Activities

### GPSA Preparing for Upcoming Season - New Teams and New Players Welcome!

The Goddard Slow Pitch Softball Association (GPSA) leagues are preparing for the upcoming season, and would like to extend an invitation to any new teams or players to join the GPSA. The leagues are open to all civil servants and contractors working on a NASA contract, and/or their immediate family members (spouse, siblings, children or in-laws).

The games are played at the old Antenna Test Facility, located off of Beaver Dam Road, on Monday through Wednesday evenings, immediately after work. The games are supervised by Goddard umpires. All skill levels are represented on the various teams, and the games are competitive, but fun. The GPSA is interested in any new teams that would like to join, or individuals who might want to play as the existing teams may need a few players. Interested new team representatives, or individuals, should contact Bill Guit (GPSA President) or Walt Moleski (GPSA Treasurer), Bill Guit 301-614-5188 or [William.J.Guit@nasa.gov](mailto:William.J.Guit@nasa.gov) Walt Moleski 301-286-7633 or [Walter.F.Moleski@nasa.gov](mailto:Walter.F.Moleski@nasa.gov)

So, whether you imagine yourself to be a Barry Bonds-like star, or just someone who likes to play softball, this is your opportunity to get back on the fields in organized games. Whether you've dreamed of hitting that walk-off home run or making the great defensive play to end the game, or just want some fun/entertainment and a chance to run and play like you did as a kid, please contact either Bill or Walt.

Please contact us by **February 1, 2004**, if you are entering a new team into the league or if you are an individual seeking placement on an existing team.

### MAD Winter Show "You're a Good Man, Charlie Brown"

This year MAD will present it's first ever Winter Show Musical, "You're a Good Man, Charlie Brown". This show based on the comic strip Peanuts, is aimed at an adult audience, but is suitable for all ages. Performances dates are February 13, 14, 15, 20, 21, 22, 27 and 28.

Ticket sales will begin with a on-site sale in the bldg 1 cafeteria from 11 AM - 1PM, **January 8, 2004**. A second on-site sale will be held on **February 3, 2004** also from 11 AM - 1 PM in the bldg 1 cafeteria. Or call (240)475-8800 for ticket information. A PDF copy of the sales flyer is available on line at <http://www.madtheater.org/CBFLyer.pdf>.

### Goddard Dance Club

Start the New Year off right - make a resolution to have fun. Join the Goddard dance class for the 2-month dance class series start **Wednesday, January 7, 2004**.

The Goddard Dance Club is offer classes in Basic Ballroom Dancing featuring Rumba and Cha Cha, Wednesdays 7:30 to 9:30 PM. The price is \$60.00 for this set of two-hour lessons. All classes are held in the Building 8 Auditorium.

Please contact the class representatives: [Ike Orlowski at ikeorl@aol.com](mailto:IkeOrlowski@aol.com) or by phone at (h)301-805-81253, or just show up at the class and register at the door. Intermediate Classes and dance practice sessions also available. Visit <http://gewa.gsfc.nasa.gov/clubs/dance/goddard.htm> for more information.



# Employee Spotlight

By Lynn Chandler



## Get to Know Dr. J. Marshall Shepherd

Don't ask Dr. J. Marshall Shepherd, aka Marshall, if he is a weather forecaster or on TV when you meet him. Marshall, is a research meteorologist in the Mesoscale Atmospheric Processes Branch, Code 912. However, he is currently fulfilling an important role at NASA Headquarters as the Science Communications Manager for the Office of Earth Science. This is a temporary assignment and Goddard is anxiously awaiting his return.

### Personal info:

Marshall lives in Bowie with his wife, Ayana and their new baby *girl* Arissa Nicole. His new favorite thing to do is play with his baby daughter. "When I began working for NASA, I thought that space and scientific discovery were the most breathtaking things, until Arissa came along," Shepherd said.



Dr. Marshall Shepherd with wife Ayana and their daughter Arissa

Before becoming a new father, he really enjoyed new audio-video technology, especially collecting the latest technology gadgets and CDs. His current CD collection is approaching 1,500. His music taste is very eclectic, but his favorite artist is an obscure group called the Style Council. He also enjoys playing tennis, basketball, softball, golf and working out. In high school, he lettered in both tennis and basketball, and also played competitive United States Tennis Association tournaments. He also is the captain of his GSFC-League Basketball team, the Bolts (as in "lightning", get it). He's a pretty good Scrabble player, too. Ask his wife. And for anyone who knows Marshall, he is also a big Florida State football and basketball fan.

### Growing Up

Marshall grew up with his mother in a single-parent home in a suburb of Atlanta, Georgia. His mother is a retired teacher and a principal. His father is a principal too. His love for science goes all the way back to his elementary school days when in sixth grade, he won a major science fair in Georgia with a project entitled "Can a Sixth Grader Predict the Weather?" He made all of the weather instruments and developed a weather/climate model for

his hometown. His sixth grade teacher, Mrs. Lillian Nash at North Canton Elementary, was particularly instrumental in showing him that he could pursue his science dreams. From this point on, he wanted to study the weather, but he also knew that he didn't want to be a forecaster or on TV. Instead, he wanted to know why things happened with weather.

### Academic Journey

After graduating from Cherokee High School in 1987 as its first African-American Valedictorian, he attended The Florida State University as a National Achievement Scholar and received a B.S. in meteorology. He then received a fellowship from the American Meteorological Society to pursue a M.S. degree in physical meteorology. NASA funded him to return to Florida State University to pursue a doctoral degree through a research and study fellowship. Dr. Shepherd became the first African-American to receive a doctoral degree in any discipline of meteorology from FSU, one of the oldest and highly-regarded meteorology departments in the country.

### Career Journey

Before joining NASA, he started Metropolitan Weather Solvers, a consulting firm specializing in weather-related information for construction companies, law firms, etc. He also worked for the National Oceanographic and Atmospheric Administration (NOAA). However, he always dreamed of working at NASA, as he spoke about during his high school valedictory address. He ultimately followed his dream and joined the NASA team, first, as a contractor with SSAI, and then as a NASA civil servant.

This was just the beginning of a very rewarding career as a NASA research scientist. Among his highlights are serving as the outreach scientist for the Tropical Rainfall Measuring and Deputy Project Scientist for the Global Precipitation Measurement mission. For the past 10 years, he has used aircraft, satellites, radars, and sophisticated models to conduct his research. Research to help us understand and predict thunderstorms, hurricanes and other weather phenomenon.

Continued on page 10

## Marshall Shepherd (cont'd)

His most recent research involves investigating how cities affect weather and climate. His work was recently featured in science journals, Time magazine, and major media outlets like CNN, MSNBC, and the networks. He also recently convened a major session on Urbanization and Climate at the 2003 Fall AGU meeting.

Currently he is at NASA Headquarters serving as the Earth Science Enterprise's inaugural Science Communications Manager. In this role, he was asked by the Associate Administrator to work closely with a broad array of public affairs, policy, and science partners to develop strategies to communicate the ESE message, successes, and strategy. He was instrumental in drafting the ESE's first Outreach and Communications Plan. The Enterprise seeks to understand the Earth as system and how changes in the atmosphere, land, ocean, and ice regimes impact Earth's habitability, life-sustaining resources, and quality of life.

Marshall supports NASA and the larger scientific and educational communities through his work as a JASON Host Researcher, membership in American Meteorological Society, National Technical Association, American Geophysical Union and the International Association of Urban Climatology among others. He has chaired several

AMS, NASA-related, and other science and policy committees. He is also active in his alumni fraternity, Alpha Phi Alpha Fraternity, Inc. and serves as President of the DC Metro Area FSU Black Alumni Association. He is an AMS/TRW Industry and Dolores Auzene Fellow as well as a National Achievement Scholar. He is a member of Order of Omega, Seminole Torchbearers, Chi Epsilon Pi Meteorology Honorary, and Omicron Delta Kappa National Honorary.

He even makes TV and radio appearances as a NASA expert on weather, climate, and remote sensing on CNN, CBS, ABC, NBC, and CNBC. Also, he recently co-authored a children's book with Dr. Fred Bortz on conducting weather-related science projects and understanding basic weather information. The book entitled "Dr. Fred's Weather Watch," chronicles Marshall's science project days and teaches kids how to build their own weather station as well as utilize the internet for weather.



Shepherd reviews data while in the Scientific Visualization Lab.

Marshall describes his work at NASA like a kid in a candy store. "I got into the field by doing a science project and now, I make a living doing "really big" science projects that will

hopefully make a difference in our understanding of the Earth and its weather/climate processes. The biggest difference is that I no longer have to make my own instruments because I can use the satellite, aircraft, and computer model technologies at NASA." He also hopes to inspire future generations to consider the pathway that he took. ■

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## SAFETY ALERTS

The Center receives information from the Government-Industry Data Exchange Program (GIDEP) concerning product recalls. In an effort to keep employees informed of recalls that may affect you at work and at home, Code 300 will provide alerts or recalls that have been issued by the Consumer Product Safety Commission along with web site links for retrieving further information on the recalls or alerts.

### Wal-Mart Announce Recall of Candles Because of Flammable Paint.

<http://www.cpsc.gov/cpsc/pub/prereel/prhtml04/04049.html>

### SCI Promotion Group LLC and Scripto-Tokai Corp. Announce Recall of Mini-Flashlights.

<http://www.cpsc.gov/cpsc/pub/prereel/prhtml04/04045.html>

### Bachtold Brothers Inc. Announce Recall of Brush Cutters

<http://www.cpsc.gov/cpsc/pub/prereel/prhtml04/04043.html>

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# Hubble-Sized Effort Brings Exhibit to Visitor Center

By Katie Stofer

“Oh, wow!” the blonde-headed boy exclaims as he and his friend enter the tunnel that now stands as the entrance to the Space Science Gallery at the Goddard Visitor Center. He marvels at the beautiful images surrounding him, part of the new installation “Hubble Space Telescope: New Views of the Universe.” Gone are the dusty decades-old cabinets. In their place are modern, sleek interactive components that showcase Hubble’s legacy in pictures and words. However, the marvelous images only tell half the story, masking the months of effort put in by a handful of people to bring the exhibit to Goddard, a collaboration worthy of the project the exhibit is based around.

It all started with a chance meeting in June 2003 between **Kevin Hartnett**, a member of the Hubble Space Telescope (HST) Technical Management Team at Goddard, and **Maurice Henderson**, program manager at the Visitor Center.

Hartnett brought friends to the Visitor Center as he had heard they were using Hubble images from an outreach CD from the project. In talking with Henderson that day, the men brainstormed about ways to bring a Hubble show to the Center.

Hartnett took the idea to his boss, **Jim Jeletic**, HST Science Operations Manager at Goddard. Jeletic jumped on the idea.

“The Visitor Center is the front door to Goddard for the general public. It reflects the work and the quality of the work of the people here,” Jeletic said in a recent interview, noting his enthusiasm for the exhibit from the start.

With the HST project on board, things got serious very quickly. The trio heard news of a traveling exhibit created by the Space Telescope Sciences Institute and the Smithsonian Traveling Exhibits Initiative that was available. Given Goddard’s role in the Hubble, this seemed like an excellent solution.

The next step was checking with the Office of Public Affairs as to the future of the Visitor Center. After September 11, 2001, many community activities were discontinued or suspended due to security concerns. However, there had been talk of significantly enhancing the Visitor Center, though nothing had been finalized yet. **Mark Hess**, Chief of Public Affairs, saw



Tunnel-like entrance to Hubble exhibit begins imaginary adventure of visiting galaxies.

the same promise in this exhibition that Henderson, Hartnett and Jeletic did.

Agreeing that Goddard should have a place to share with the public the work that goes on inside, Hess said, “I was very appreciative of the HST team volunteering to do something that would make an impact.”

**Continued on page 12**

Photos by Chris Gunn/293



Hubble exhibits includes interactive kiosks about galaxies and stars.

## Hubble-Sized Effort Brings Exhibit (cont'd)

Time got even shorter: at this point, other groups around the country were expressing interest in the exhibit, and the Smithsonian was ready to ship the components nearly immediately. That meant coordinating expediently with Procurement to secure funds for transportation and for the exhibit's designers to come down and help set up at Goddard.

The exhibit filled three tractor trailers, all told, with large panels of famous Hubble images, interactive components, and the



The HST exhibits has several educational interactive components.

infrastructure to support the nearly 5,000 square foot show. In addition, the Visitor Center front gallery already housed a full complement of displays that had to go somewhere just to be able to unload the trucks that would bring the HST exhibit. So, "once the decision was made, there was no turning around," said Henderson.

At this point, summer was winding down, and the exhibit was set to open October 3. Traveling exhibits of this magnitude often take full time staffs a month to put together; Jeletic, Hartnett, and Henderson all had other full time jobs to do. The Visitor Center itself still hosted school groups, the new Space Chats, and employee tours. "You just . . . do it," said Henderson of the task before the group.

The Federation of Galaxy Explorers wanted to hold a week-long space camp with 200 students and needed an empty Visitor Center to do it. They lent hands clearing out the front room, moving things into the auditorium and/or putting things out for removal, spending Friday night,

August 8, until midnight doing so. Logistics helped take remaining items away.

Facilities came to install new wires to support the panels and give guidance on wiring the multiple computers, display panels, and audio components. The exhibit left Kansas City on August 15, and arrived at Goddard August 18. More than 50 crates filled the auditorium, hallway, and front room. The exhibit designers on contract arrived from Massachusetts to help layout all the pieces. Then Hurricane Isabel struck.

Security sent everyone home. The group came back for a few hours the next day anyway, and the contractors had to leave Friday morning, but they got in three good days of consulting. At this point, Henderson, Hartnett, Jeletic, and Visitor Center Tour Director **DJ Emmanuel** were basically on their own to finish putting things together, giving up nights and weekends to the effort.

Things didn't end up quite perfect – the four main sections, or "icons," ended up slightly out of order due to space constraints at the Visitor Center. When everything was wired up, some components still didn't work and displays had to be thoroughly debugged or entirely replaced.

However, the exhibit also allowed for Goddard to put on its own spin: the group added music and a Hubble slide show projected on the floor of the tunnel entrance, and Henderson already has plans for enhancements of Braille for visually impaired visitors and content updates over the next years of Hubble and the forthcoming years of the new James Webb Space Telescope. A few blank panels also remain in the exhibit, though Henderson, a retired electrical engineer who "had to do something" with his retirement, already envisions those filled as well.

Jeletic, seasoned at outreach through talking with kids and public about his NASA work, called the experience "one of the highlights of [his] career." It was another opportunity, he felt, to reach out and share the inner workings of NASA and a chance for him to do a lot of different things and learn a lot, too. As a community, "Goddard should be very proud," he says of the new face the center has for the outside world. Indeed, the familiar figure of Dr. Goddard, in his new position by the door to the Rocket Garden, does seem to be smiling on their efforts. ■





## The Diversity Dialogue Project

### The View from a Recent Participant

The Diversity Dialogue Project (DDP) began as a pilot in 1999 with the first phase beginning in February 2001. The project was initiated by the Diversity Council as a continuing effort to build an organizational climate in which employees respect, appreciate and value individual differences. The confidential dialogue sessions consist of small groups of employees engaging in an open, comfortable and non-judgmental environment discussing differences based on many dimensions of diversity at Goddard. The 2-hour dialogue sessions are held every other week for four months.

Participating employees have gained a greater sense of Goddard's values and appreciate the effort that management has taken to ensure a work environment conducive to their best performance according to the Center's values and goals. Employees report valuing the DDP when managers (especially senior leaders) and supervisors are included in their dialogue sessions.

An engineer from the Hubble Space Telescope project, who recently completed a DDP session, expressed the benefits she gained from taking part in the Project. "I found it to be worthwhile. Immediately after I finished the program I encouraged my supervisors to participate. Even if you're sick and tired of hearing about diversity, I think this program is different enough from the norm to make it worth considering."

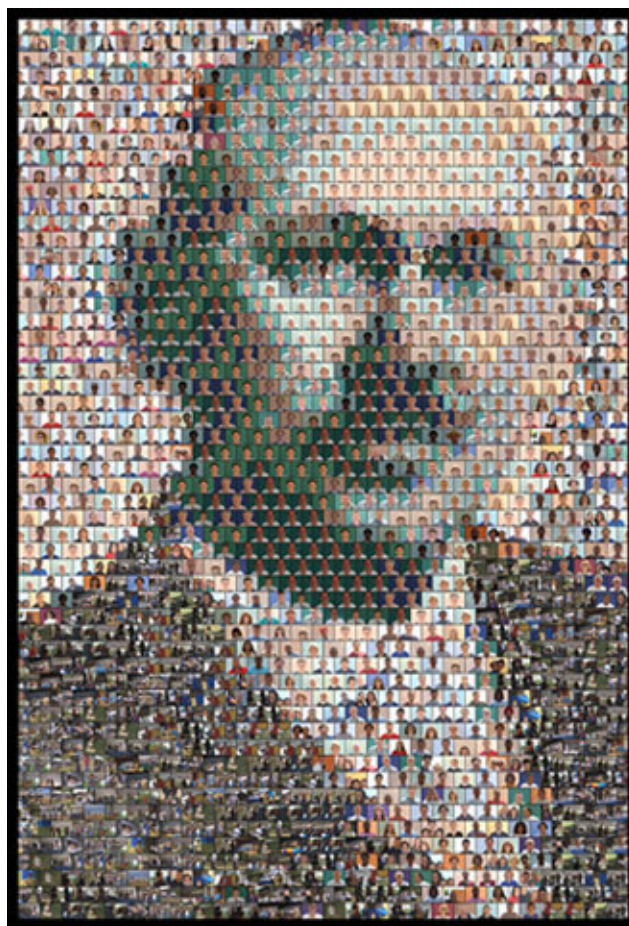
"The biggest difference in this program is that you don't learn about communicating across differences instead, participants actually communicate across differences," she said. "Somewhat slowly, occasionally painfully, often humorously — and I always found (communicating) fascinating. The group agrees to some very simple groundrules and commits to an elegant and simple communication style ("dialogue") and then the group evolves into something new over the next few months by discussing whatever topic is brought to the table."

She encourages manager participation. "The organizers work hard to make the groups diverse — by all diversity factors you can name. I found it extremely interesting to have managers, engineers, technicians, clerical folks and scientist types in the meetings. What I learned about the differences in their perspectives surprised me, and the lessons I learned from that experience brought lasting benefit to my daily work. That's why I'm really encouraging my managers to attend.

Participation by managers will make the program better for everyone participating, and I think it's likely to have a positive effect on them (and those they manage)."

"My experience was both enlightening and empowering. I can't guarantee your group will be as interesting and lively as mine was," she added, "but I can promise you that it's not sensitivity training, and that there will be no compulsion to be politically correct in the discussions. In fact, the more honesty people brought to the sessions, the more interesting they became. All in all, I really think the potential benefits far outweigh the cost of the time commitment."

Since beginning in February 2001, 15 percent of Goddard's civil servants have participated in the DDP with most of the feedback from the sessions being generally positive. The Diversity Council wants everyone to acquire the benefits from DDP and is determined, "to foster an organizational climate where employee diversity and mutual respect are catalysis for creativity and team effectiveness." The next DDP will begin on January 20th and is open to all civil servants. If you would like to participate, please contact Sharon Wong at [Sharon.M.Wong@nasa.gov](mailto:Sharon.M.Wong@nasa.gov) or at 301 286-0475, and bring your manager along. ■



The many faces of Goddard employees as photographed during Celebrate Goddard Day; each playing a unique role in creating Goddard.

## Update on GSFC'S Implementation of the Class Action Settlement

As part of Goddard's ongoing implementation of the Class Action Settlement, there are a number of next steps for implementing the remaining programmatic requirements:

- A Questionnaire on Work Requirements will be distributed to all GSFC Scientists and Engineers at the GS-13 and above level. **The Questionnaire will be available from January 5 to January 23, 2004.** These questionnaires will give scientists and engineers an opportunity to provide comprehensive input on their job duties. The data will then be used to ensure the promotion criteria are relevant to the functions performed.
- A Survey on Individual Development Plans will be distributed to all GSFC Civil Servants. **The Survey will be available from January 12 to February 13, 2004.** The Settlement includes several requirements for fostering the usage of Individual Development Plans (IDP's) and ensuring the open communication of career development opportunities to the entire GSFC community. The IDP survey results will be carefully reviewed for information as to how the IDP process might be improved to become a more meaningful developmental tool.
- There will be mandatory Equal Employment Opportunity Training for ALL GSFC Supervisors. **Classes will be held in January and February.** To register go to <http://ohr.gsfc.nasa.gov/EOTraining>. The training will cover bias awareness, perception, and job assignments. All supervisors will soon be receiving information about training dates. One of the main objectives of the training is to provide supervisors with tools to help identify and successfully resolve issues before they become problems. The vendor was chosen pursuant to guidelines established by the Settlement and via input from a diverse panel of GSFC supervisors. We are confident the training will prove to be valuable and useful.
- Training on Alternative Dispute Resolution (ADR). Earlier this year, an independent expert conducted a review of our EEO Alternative Dispute Resolution (ADR) process for informal EEO complaints. In response to the expert's recommendations, the Center is developing plans to implement a workplace dispute resolution pilot program designed to help employees and supervisors acquire more effective conflict management skills as well as offer mediation or facilitation by outside parties for resolving workplace issues. More information about this program will be provided in early 2004. **The tentative plan is to have training for All Supervisors in late February/early March, 2004.**

There is a comprehensive FAQ's website for Class Action related information. It has been recently updated and can be accessed at <http://eeo.gsfc.nasa.gov/classaction.html>. Check this site for updated information on these and other Class Action related efforts. ■

## Announcements

### Volunteers Needed for Educational Programs/Fairs:

#### Frederick County Public Schools

On **January 7, 2004** Earth System Science Research Course students from **Frederick County Public Schools** will hold a poster session to present their Earth System research projects. Their research demonstrates how a public school can allow students to do independent research projects... as only NASA can. Everyone on center is invited to come by and view the studentwork and discuss with them how they used NASA mission data to complete their work. They will have their work on display from 10 a.m. to 11:15 a.m. in rooms H118 and H120 (right next to H114).

**North County High School Science and Engineering Fair**, volunteers are needed to serve as judges. The results of this judging will send the top students and projects to the county competition in March. Judges are needed for **Thursday, January 22nd, 2004** in the North County High School media center from 11:20 a.m. to 1:55 p.m. There are over 45 projects this year and any help and input would be greatly appreciated. Refreshments will be provided. You will not be required to stay the entire time. If you are willing to help out, please respond by January 9th to Miss Stacie Moon, Science Fair Coordinator at 410-222-6970 or by email at [Smoon@aacps.org](mailto:Smoon@aacps.org)

#### Hands On Science Program Needs Volunteers in Montgomery County

Be an Adult Leader teaching after school enrichment science classes in Chemistry and Earth Science starting in January! Gain experience helping children become aware of how the world works. Learn about the schools near your home as you lead Hands On Science classes that take place at the schools. Meet other parents both in your community and in the Hands On Science program. Learn safe, simple science activities appropriate to your child's age and be a part of a team while you help your school and community. If you have previous experience working with groups of children in any setting, a college degree in any field, or equivalent professional experience and are available after school for at least one hour a week for eight weeks, get involved in Hands on Science! Course curriculum and all supplies necessary to teach the class are provided. If this sounds like something you'd like become a part of contact Kimberly Jackson at 301-929-2330.

#### The ODIN's December Issue of Newsletter is Available

The **December** issue of the **ODIN Interchange Newsletter** is available on our Website at <http://www.acs-odin.com/gsfcc/newsletters/GSFCDec03.pdf>. This issue features CNE services, USB portable storage device, Windows XP rollout, and more. ■



# Goddard in the News

## Jeff Halverson

### Authors Weatherwise Features

By Mike Bettwy

NASA Goddard scientist Jeff Halverson has begun writing short feature articles for *Weatherwise* magazine that provide easy-to-understand explanations of meteorological hot topics and recent weather events. Below is a sampling of published articles.

Be sure to check back often to review his latest topics. (You can find recent copies of *Weatherwise* in the Goddard Library).

Jeff is the Education and Outreach Scientist for the Tropical Rainfall Measuring Mission satellite and is an employee of both NASA Goddard in Code 912, and a Research Associate Professor of Geography at the Joint Center for Earth Systems Technology (JCET), University of Maryland Baltimore County. Jeff is also currently an Assistant Program Scientist of Atmospheric Dynamics and Remote Sensing in the Office of Earth Sciences at NASA Headquarters.

In addition to writing articles for *Weatherwise*, Jeff recently did live interviews on NASA-TV this past fall on the hurricane season of 2003.

Jeff's research interests include: Severe storms in the tropics and mid-latitudes, especially the dynamics and rainfall processes associated with tropical cyclones. He received his Ph.D. in Environmental Sciences at the University of Virginia.

#### **The Shape of Summer's Thundery Winds (Nov/Dec 2003)**

The causes and varieties of thunderstorms are examined, including the intricacies among squall lines, mesoscale convective complexes (MCCs), bow echoes, straight-line winds and derechos.

#### **Casino in the Clouds (Nov/Dec 2003)**

The probability of heavy rain in Las Vegas might be about as high as your chance of scoring it big. But thanks in part to the summer

monsoon, a freak and sudden thunderstorm overtook the city in August 2003, placing the city at the mercy of Mother Nature.

#### **The Misleading Measure of the Mean (Sep/Oct 2003)**

Washington, DC is one of the world's greatest meteorological powerhouses, with tons of atmospheric data on every topic imaginable. But examination of rainfall time series in the region shows the shortcomings of a popular mathematical analysis.

#### **The Eyes of Isabel (Jan/Feb 2004)**

Halverson examines how satellites, including NASA's Tropical Rainfall Measuring Mission (TRMM) satellite, reveal the science behind unique eye shapes often seen within strong hurricanes, like Isabel, in September 2003.

#### **A Tale of Two Whirls (Jan/Feb 2004)**

The different processes associated with the creation of wind energy in extratropical and tropical storm systems are discussed by examining the makeup of Hurricane Isabel and an extratropical, mid-latitude windstorm that roared through the Northeast United States in fall 2003.



Photo by Chris Gunn/293  
Jeff Halverson, Education and Outreach Scientist for TRMM

Media coverage from last months American Geophysical Union presentations from Goddard scientists was phenomenal. **Jim Hansen**, GISS and Larissa Nazarenko's, Columbia University Earth Institute paper on the emissions of black soot altering the way sunlight reflects off snow was an international hit. *ABC, CBS, CNN, BBC, CTV Canada, Independent Online South Africa, The Mirror (London, England) and National Public Radio* were among the many newspapers, web, radio and television media networks that covered the story.

The study of urban impact on local rainfall, by **Dr. J. Marshall Shepherd**, Goddard and Steve Burian, University of Utah, Salt Lake was also a winner with the media. Coverage was received from *ABC, CNN, LA Times, Centre Daily Times* and *Science Daily* to mention a few.

*ABC, BBC, CTV Canada, Innovations Report (Germany), Duluth News Tribune, LA Times* and *Spaceflight Now* were among the many media networks that issued stories on the 3-D images from ICESat. The 3-D views of Earth's polar ice sheets, clouds, mountains and forestlands were not only spectacular, but provided important scientific data about the ice sheet's behavior and response to changes in climate. In addition, *Yahoo.com* chose the ICESat images as their "Editor's Pick", a section where only exceptional photos are displayed.

# EVENTS

## Systems Engineering Seminar

**Who:** Harry Frisch, Code 592 will present on "System Engineering Standards." The state of the art in standards based unambiguous computer sensible communication is the subject and focus of this lecture. All employees and visitors with a Goddard badge are welcome.

**When/Where:** Tuesday, January 13, 2004 at 1 p.m. in the bldg. 3 Goett auditorium

**For more information** call Tom Bagg, 301-867-0063, email at [Thomas.C.Bagg.1@gsfc.nasa.gov](mailto:Thomas.C.Bagg.1@gsfc.nasa.gov), or visit: [http://seacd.gsfc.nasa.gov/SE\\_Seminar/](http://seacd.gsfc.nasa.gov/SE_Seminar/)

The seminar will be webcast live to the NASA domain at: [http://128.183.174.165/Colloquia\\_asx/NASA/Live/B3NASALive.asx](http://128.183.174.165/Colloquia_asx/NASA/Live/B3NASALive.asx)

## Lunch and Learn

**What:** Dr. Sarah Day from Sport And Spine Rehab will present a discussion that focuses on nutrition as it relates to your specific exercise routine and requirements. Injury prevention will be discussed. Body fat analysis will be offered to those who attend this discussion.

**When/Where:** Tuesday, January 20, 2004 from 12 to 1:30 p.m. in bldg 26, room 205. Both contractors and civil servants are welcome to attend.

Please call the health unit to register and for further information.

## Space Chats - Mars Exploration Landing

**What:** Everyone is invited to share in the new discoveries from Mars. The NASA's Mars Exploration Rover, Spirit has successfully landed on Mars and is returning stunning images. It's twin rover Opportunity, is due to land on the opposite side of Mars on January 24, 2004. This Space Chats will focus on the results from Spirit and will explore the future landing Opportunity. This event will also included with the Goddard Astronomy Club, Robotics demonstrations and the viewing live NASA TV coverage.

**When/Where:** January 24, 2004 at the Goddard Visitor Center at 7:30 p.m.

Due the heightened security level, please visit the Space Chats website for updated information on this event:

<http://www.gsfc.nasa.gov/chats/chat.html>

## Director's Colloquium

**Who:** Dr. Stewart Levine will discuss "Getting to Resolution and Achieving Win-Win Agreements." Dr. Stewart will examine how we succeed in life by forming agreements, agreements with others and ourselves. The ability to craft effective agreements and collaborative partnerships is a fundamental life skill critical to one's success in business, sales, leadership and professions of every kind. Beginning with a thoughtful, frank discussion on the front end, and reaching a joint vision of the outcome, is much more powerful and efficient than trying to win a fight. Stewart will show us how to create "covenantal" relationships that are based on shared commitment to ideas, issues, values, goals and process. Covenant is the true source of real teamwork and is a key ingredient for having a "family" at work and a "family" at home.

**When/Where:** Wednesday, January 21, 2004 at 10 a.m. in the bldg 3 Goett auditorium. Afternoon small group discussion is from 2 p.m. to 3 p.m. in bldg 8 room 309.

For more information, visit: <http://centerdircolloq.gsfc.nasa.gov/>

## Upcoming Training

IDP Workshops

In the IDP Workshop for Supervisors and the IDP Workshop for Employees, many questions have come up around the IDP process. Under OHR's career development page, there is a list of Frequently Asked Questions (FAQs) that have come from both supervisors and employees. These questions have been answered by OHR staff and legal counsel. Please take time to review these FAQs at <http://ohr.gsfc.nasa.gov/DevGuide/idp.htm>. Questions? Please contact Tracey White. The view all of the upcoming training courses, visit: <http://ohr.gsfc.nasa.gov/DevGuide/Calendar/home.htm>