

## NASA Balloon Flight Sets Record

By Elizabeth Flowers

Flying near the edge of space, a NASA scientific balloon has broken the previous flight record for duration and distance with a flight of nearly 42 days, traveling three orbits around the South Pole. The record-breaking balloon carried the Cosmic Ray Energetics And Mass (CREAM) experiment, designed to explore the supernova acceleration limit of cosmic rays, the relativistic gas of protons, electrons and heavy nuclei arriving at Earth from outside the solar system. In addition to gathering scientific data, the flight is a demonstration of the NASA Ultra-Long Duration Balloon (ULDB) support system capabilities. The ULDB is being developed to extend flights up to 100 days.

Photo by Univ. of Md.



Inflation of the NASA scientific balloon prior to launch.

“Balloon-borne detectors flying at the top of the atmosphere can identify incoming particles before they are broken up in collisions with air nuclei,” said Eun Suk Seo, the Principal Investigator for CREAM at University of Maryland, College Park.

“These state-of-the-art particle detectors were for the most part built in university laboratories by students and young scientists and engineers”, said Dr. W. Vernon Jones, Senior Scientist for Suborbital Research at NASA Headquarters.

The scientific balloon was launched from the National Science Foundation’s McMurdo Station, Antarctica on Dec. 16, and traveled 41 days, 22 hours, landing on January 27, 410 miles from McMurdo Station. The payload was recovered.

“We are excited with the duration of this flight which allowed the scientists to get ample science to perform their studies,” said David Pierce, Chief of the Balloon Program Office. “We routinely have long duration balloons that float for up to two weeks, but to have one flight last for more than 41 days is very rewarding.”

An enormous balloon was needed to hoist the two-ton CREAM experiment to about 125,000 feet. The balloon used for this Antarctica flight expanded to a diameter of more than 450 feet and weighed 4,055 pounds.

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### NASA’s Mission:

- \*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 detail of the NASA mission, go to:  
[http://www.nasa.gov/missions/solarsystem/explore\\_main.html](http://www.nasa.gov/missions/solarsystem/explore_main.html)

Editor: Trusilla Steele  
[Click here](#) to view previous issues  
of Goddard News

# Countdown Has Begun for 2005 FIRST Robotic Competition

*Third Annual Chesapeake Regional Scheduled for March 17 -19*

By Dewayne Washington

The countdown has begun, for teams registered to participant in the 2005 FIRST Robotic Competition season, which begins March 3. Triple Play, this year's game was introduced during the 2005 Kickoff event, hosted Saturday, Jan. 10, at FIRST headquarters in Manchester, New Hampshire. The kickoff was also beamed, via NASA-TV, to 31 remote locations throughout the United States, Canada, Great Britain, South America and Israel.

For the third year in a row, the Chesapeake Regional Steering Committee coordinated the satellite venue within the state of Maryland for the kickoff event. Nineteen local teams gathered at Capitol College in Laurel, Maryland to watch the telecast from FIRST headquarters. Following the telecast, teams were issued their robot kit and given the opportunity to attend several workshops that afternoon.

Teams now have until the last week of February to build, test and ship their robot for the start of the competition. They will compete for honors and recognition that reward design excellence, competitive play, sportsmanship, and high-impact partnerships between schools, businesses and communities.



A crowd of more than 250 attended the remote kickoff at Capitol College.

Regional competition begins March 3. The Chesapeake Regional is scheduled for March 17-19, at the historic Naval Academy in Annapolis, Maryland. The FIRST 2005 championship event is scheduled for April 21-23, at the Georgia Dome in Atlanta, Georgia.

Goddard is a major supporter for the Chesapeake Regional Competition, which is endorsed by the state of Maryland. Last year, fifty-seven teams comprised more than 1,500 students who represent the state of Maryland, the District of Columbia and nine other states for the FIRST regional. Goddard will provide direct support to 28 teams this year, according to Goddard Aerospace Engineer Technician, Mike Wade, Co-Chairman for the Chesapeake Regional Steering Committee and the 2003 Chesapeake Regional FIRST Volunteer of the Year.

Beginning its fourteenth season, FIRST Robotics competitions have grown from 28 to more than 900 teams, with more than 20,000 students participating in 30 regional competitions. Teams are now established throughout the United States, Canada, Brazil, Great Britain, Ecuador, and Israel. Also, for

2005 there will be a FIRST regional event in Las Vegas, Nevada; Rochester, New York; West Lafayette, Indiana; and Waterloo, Ontario.

"Why do we change the game every year," stated founder Dean Kamen during the kickoff event. "FIRST is a microcosm of the world, which is what we set out to do some years ago. But really, the robot is just a vehicle for the building of relationships for adults and children. This is the hardest fun you'll ever have and everyone that participates is a winner."

During the kickoff event, Kamen also talked about being gracious professionals and insisted that FIRST gives kids the

opportunity to practice solving real world problems. He spoke of the probability that some FIRST participants may someday be involved in solving real world problems, such as the recent disaster of the Tsunami. "FIRST is a life-changing, career-molding experience," says Kamen.

This year, the Chesapeake Regional will celebrate its third season and currently has more than 50 teams registered to

compete. Recognized as the second largest FIRST regional, committee members are anticipating a twenty percent increase of spectator and student involvement that will include students from across the country and an international team from Great Britain.

"The recent FIRST Robotic kickoff event initiates the beginning of a challenge that stimulates students to venture into the fascinating world of science, engineering, and technology," said John Murdock, Co-Chair, Chesapeake Regional Steering Committee. "This year's challenge will again offer the rewards and new opportunities synonymous with FIRST. I look forward to a fun, exciting and challenging 2005 Chesapeake Regional and wish all teams the best of luck. Let the 2005 competition begin."

FIRST was founded in 1989 by accomplished inventor Kamen to inspire an appreciation of science and technology in young people, their schools and their communities. Based in Manchester, New Hampshire, the non-profit organization



## FIRST Robotic (cont'd from page2)

designs accessible, innovative programs to build self-confidence, knowledge and life skills while motivating young people to pursue academic opportunities.

"The FIRST Robotics Competition is not just about the design and building of sophisticated robots. These students also develop maturity, professionalism, teamwork and mentoring skills that enrich their lives," said Kamen. "Many of our students develop an affinity for their science and math courses, go on to study engineering, technology or science in college, and also to pursue employment opportunities with sponsoring companies," Kamen added.

Colleges, universities, corporations, businesses, and individuals provide scholarships to participants. This year's total has exceeded 4 million dollars. For volunteers, it is a great opportunity to have a positive influence on the future of our country. FIRST competition allows involved engineers to again experience the excitement they felt when first entering engineering as a profession.

Photos by Chris Gunn/293



Participants look over examples of game pieces for the 2005 competition.

The major thrust for FIRST parallels the third portion of NASA's mission statement, of inspiring the next generation of explorers as only NASA can. "You have teenagers thinking they're going to make millions as NBA stars when that's not realistic for even one percent of them. Becoming a scientist or engineer is," says Kamen.

If you are interested in becoming a volunteer for the 2005 Chesapeake Regional, contact Desiree Taminelli at 301-286-8593. For more information about the FIRST community and the 2005 competition visit [www.usfirst.org](http://www.usfirst.org) or <http://www.mitc.org/first/>.

## In the Safety Corner

### Winter Fire Prevention Tips

- Smoking in all buildings and facilities on the Center is prohibited. Smoking is permitted only in designated areas outside. Smoking is also prohibited in all GSFC Government vehicles. Smoking materials must be disposed of in designated receptacles.
- The burning of candles is prohibited at the Center due to the fire hazard they present.
- At home, keep candles away from combustible materials. Don't leave children unattended in a room with lit candles. Keep candles, matches, and lighters out of the reach of children. Never display lighted candles in windows or near exits.
- Be aware of overuse of electrical outlets. Don't overload your electrical outlets. Be careful of extension cords that present hazardous walkways.
- Extension cords should never be used in place of permanent electrical wiring.
- Microwave ovens should be used with caution. Coffee makers should be unplugged when not in use.
- Safely dispose of stove, fireplace, and grill ashes. First place them in a metal bucket, soak with water, and then bury them in mineral soil.
- Never store flammable material like firewood or lumber under or near your home. Keep it at least 100 feet away from the house, but never uphill because burning material will roll.
- Inspect fireplaces and wood stoves. Have your chimney connections and flues inspected by a professional and cleaned if necessary prior to the start of every heating season. Use a sturdy screen when burning fires. Burn only wood-never burn paper, including discarded gift wrap, or pine boughs. Do not hang decorations from or on your fireplace if you plan to use it as a heat source.
- Check smoke detectors. Make sure detectors are working properly and those new batteries are installed.



## Diversity Dialogue Project Phase G Ends

The Diversity Dialogue Project (DDP) Phase G ended December 2004. During this Phase there were a total of 6 groups comprised of 4 groups at the Greenbelt campus, and 1 cross-Wallops/Greenbelt group that met in Easton which included participants from Wallops and Greenbelt. In addition a pilot for an all supervisors group was conducted. Approximately 80 employees participated during this Phase with representation from each Directorate.

The DDP began in February 2001 and was initiated by the Diversity Council as a continuing effort to build an organizational climate in which employees respect, appreciate and value individual differences, and fosters a deeper understanding and appreciation of diversity issues among Goddard employees. 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. In addition the DDP may also serve as a vehicle for raising diversity related issues that impact our employees. For example, during a session with the cross-Wallops/Greenbelt DDP group, the participants from Wallops spoke of the challenges employees at that campus faced as a result of not having an on-site Human Resources Specialist. While the Office of Human Resources was already in the process of trying to fill this position, added emphasis was placed on this situation by surfacing the issue to the Goddard Diversity Council.

Since the DDP's beginning, 15 - 20 percent of Goddard's civil servants have participated in the DDP with the feedback from the sessions being generally positive. 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), supervisors and project managers

are included in their dialogue sessions.

Deputy Director and Diversity Champion Chris Scolese participated with many of the groups. After his first group meeting, Chris shared that "I was impressed with the openness and willingness of the participants to share their thoughts which gave me a greater understanding of the benefits of the DDP." In attending other DDP sessions, Chris stated that "I was impressed with the topics discussed, the facilitators and the open dialogue that resulted from the dialogue. The DDP is one way in which issues are addressed in a non-traditional way when participants are able to surface concerns and discuss it openly. In this way, participants are able to go back to their organizations and suggest changes and/or improvements." He reiterated the importance of the DDP in the accomplishment of Goddard's mission because it opens lines of communications and allows for employees to share opinions/ideas without fear of retribution. For Phase H which just began in January, Center Director Ed Weiler and Deputy Director - Technical, Dolly Perkins are also scheduled to participate with the groups. ■

## Goddard Diversity Council Encourages Respect for Differences With Presentation from Holocaust Survivor

By Trusilla Steele and Sharon Wong

Photo by Chris Gunn/293



Godin holds image of malnutrition and encourages everyone not to allow genocide and hunger to occur just as it did in the Holocaust

The Goddard Diversity Council sponsored Holocaust Survivor, Nesse Godin in an effort to enhance and increase the understanding of the imperative to create an environment that respects diversity and which is conducive to achieving excellence and success.

Godin conveyed the message to a standing-room-only audience on Jan. 27; a day commemorating the liberation of the Nazi Concentration Camps. Godin did not express hatred for those who were responsible for her family

members' death and her unforgettable torment. Rather her message was to share memories so as to never allow a catastrophe like the Holocaust to occur to any human being, no matter their belief, culture or race.



## 2005 Observance to Showcase Our Own

By Dewayne Washington

The Goddard African American Advisory Committee has scheduled a month of activities that joins a national observance of black achievements known as Black History Month. The African Diaspora - Showcasing Our Own, is the theme for the 2005 observance of National African American History Month.

According to Nate James, Chairperson for Goddard's African American Advisory Committee (AAAC), this year's activities will again recognize the achievements of African Americans throughout history and more. "During the month, we will examine African achievements in science and technology from the cradle of civilization to present day NASA missions. We intend to involve and showcase our own African Americans in innovative ways. We will also look at the African presence in a global sense," said James.

Dr. Carter Godwin Woodson, also known as 'The Father of Black History,' is recognized as the founder of this annual observance of African American contributions. In 1915, Dr. Woodson founded The Association for the Study of Negro Life and History. Later he established Negro History Week as a way to bring national attention to the accomplishments of African Americans.

His hope was to neutralize the apparent distortions in Black history and to provide a more objective and scholarly balance to American and World history. In 1926, Dr. Woodson's dream became a reality. He chose the second week in February for the observance because of its proximity to the birthdays of Abraham Lincoln and Frederick Douglass; two individuals whom Dr. Woodson felt had dramatically affected the lives of African Americans. In 1976, the Association succeeded in expanding the observance, which then became Black History Month.

President Bush wrote of last year's observance, "We honor the heritage and accomplishments of African Americans and recognize their extraordinary contributions to the United States. African Americans have upheld the ideals of America, defended our homeland, and enriched American culture and society. Brave leaders such as Sojourner Truth, Harriet Tubman, Booker T. Washington, Martin Luther King, Jr., and Leon Sullivan caused America to examine its heart and to respect the dignity and equality of all people, regardless of race. Today, African Americans are leaders at the highest levels of the military, business, education, law, government, the arts, sports, and religion," President Bush, 2004.

"We hope to heighten the awareness of African American contributions to NASA and Goddard not only for this month, but throughout the rest of the year," said James of the AAAC. "We believe that as we learn to appreciate the greatness in each other, we can then work more effectively together to improve ourselves and our surroundings."

Some events have already occurred but others scheduled for the month at Goddard include: **February 15**, Presentation - Ms. Gwendolyn Sykes, NASA Chief Financial Officer; **February**

**16**, Presentation - Dr. Edward Dowdye, African Achievements in Science and Technology - The Great Pyramids; and **February 28**, Presentation - Leah Y. Latimer: Voices of the Civil Rights.

Other Black History events that have occurred in this month: **February 1, 1960**: A group of black Greensboro, N.C., college students began a sit-in at a segregated Woolworth's lunch counter: a civil-rights movement milestone. **February 3, 1870**: The 15<sup>th</sup> Amendment was passed, granting blacks the right to vote. **February 12, 1909**: The National Association for the Advancement of Colored People (NAACP) was founded by a group of concerned black and white citizens in New York City. **February 21, 1965**: Three Black Muslims shot Malcolm X to death. **February 23, 1868**: W.E.B. DuBois co-founder of the NAACP was born. **February 25, 1870**: The first black U.S. senator, Hiram R. Revels took his oath of office. ■



Dr. Carter G. Woodson

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### Holocaust Survivor (cont'd from page 4)

As a child in Lithuania, life for Nesse Godin and her family was normal and peaceful, without much experience with prejudice. Soon however, signs such as buildings defaced with graffiti brought on nightmares. The nightmares became real at the age of 13 when the Germans occupied Lithuania, forming ghettos where some of Godin's family was forced to live, leaving Godin and other family members behind.

Life outside the ghetto became brutal with broken promises and mass killings. Godin made a point, that many of the killings could have been prevented if their neighbors and community priest had intervened or spoken up for them despite their differences. In some cases, neighbors encouraged the Nazi by highlighting benefits of capturing the Jews and others alike.

Godin shared one poignant memory in which a young Lithuanian secretary, made a decision that resulted in her being smuggled into the ghetto contributing to her survival. Godin encouraged everyone to remember that our decisions, no matter how small, can make the difference for our neighbors and our families.

Godin concluded by recalling her days in the ghetto and in the labor camp and how she eventually was reunited with her mother. She explained why she promised to speak of her memories so that differences won't come in the way of "everyone living freely together."

To view the recorded presentation by Holocaust Survivor, Nesse Godin, contact Dennis Smalls on 6-8210 or email him at [Dennis.A.Small@nasa.gov](mailto:Dennis.A.Small@nasa.gov) ■

# Goddard in the News

By Rob Gutro

The Annual American Meteorological Society (AMS) Meeting in San Diego, Calif. occurred in mid-January. Rob Gutro of the NASA Goddard Public Affairs office and Gretchen Cook Anderson of NASA Headquarters Public Affairs traveled there to support the interesting research being presented. The news, in the form of releases and web stories, was well-received by the media and educational institutions. While at the conference, they supported various news releases and web features on Earth Science research from NASA at the meeting. They also arranged interviews with scientists and news reporters in television, radio and newspaper.

The media was very receptive to NASA's science. It was so successful, in fact, that NASA Goddard Institute for Space Studies Educational Global Climate Model (EdGCM) story reached so many, it crashed their servers! You can find the story: **Watching Earth's Climate Change in the Classroom** at: [http://www.nasa.gov/home/hqnews/2005/jan/HQ\\_05018\\_free\\_computer.html](http://www.nasa.gov/home/hqnews/2005/jan/HQ_05018_free_computer.html). Educators and students around the world, including in the U.S., England and Australia were downloading the model to use in teaching classes in high school and college.

According to Mark Chandler, the project lead on the EdGCM, on 1/13/05 the story got picked up by slash.dot which meant thousands of hits, and thousands of people trying download software. Mark suspects that NASA distributed over 9,000 copies of EdGCM. He said that "In one week the NASA/GISS GCM became the best distributed climate model in the world!" Further, Chandler said that the sheer number of people trying to download the software actually crashed the NASA servers at GISS, and special accommodations had to be made at GISS to handle the volume.

Other stories that made great news coverage was **Saharan Dust Affects Thunderstorm Behavior in Florida**, found at: [http://www.nasa.gov/vision/earth/lookingatearth/florida\\_dust.html](http://www.nasa.gov/vision/earth/lookingatearth/florida_dust.html) and [http://www.nasa.gov/home/hqnews/2005/jan/HQ\\_05015\\_saharan.html](http://www.nasa.gov/home/hqnews/2005/jan/HQ_05015_saharan.html). This research was lead by Susan van den Heever, of Colorado State University, Fort Collins, Colorado. It also received good news coverage, including WTOP-AM/FM Newsradio (Washington, DC), The Weather Classroom Radio Network, Yahoo News!, and many websites including: Space Daily, Space Flight Now, Spaceref, Space Times and Spacewire.

The team also wrote a tip sheet on various NASA presentations for news reporters. You can see that notice called: **NASA Funded Scientists to Present Findings at Annual** at: [http://www.nasa.gov/vision/earth/lookingatearth/ams\\_2005.html](http://www.nasa.gov/vision/earth/lookingatearth/ams_2005.html)

There were two other significant stories, one was about the 2005 Verner E. Suomi Award from the AMS given to William B. Rossow, of NASA's Goddard Institute for Space Studies, N.Y., who among other things made his name studying Earth's clouds and how they impact climate. The award story can be found at: [http://www.nasa.gov/vision/earth/everydaylife/rossow\\_award.html](http://www.nasa.gov/vision/earth/everydaylife/rossow_award.html)

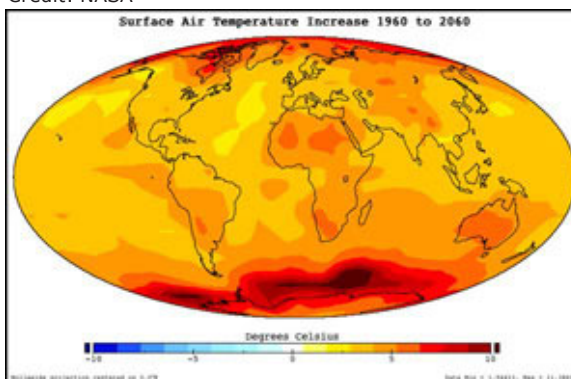
One of the biggest successes for NASA at the AMS meeting was the presence of Oceanographer Bill Patzert of NASA's Jet Propulsion Laboratory. Although Bill was presenting a poster at the meeting, reporters targeted him to answer questions about the record California rainfall that was occurring at the time of the meeting. Many reporters look to Bill for climate information.

During AMS, the local ABC Network news affiliate interviewed Patzert and NOAA's Ed O'Lenick about the **record heavy rainfall that was affecting California** at the time of the meeting. Reporter Jan Hudson from KGTV-TV the local affiliate Channel 10, in San Diego, Calif. interviewed Bill, and as a result, he appeared on ABC National News with Peter Jennings that night. He also wound up being the last spokesman at a NOAA press conference on the California rain situation, as he was in the audience and stood up to participate. In minutes he was at the podium answering reporter questions. He also appeared in the New York Times, Contra Costa Times (Calif.), San Diego Union Tribune, and various CBS affiliate television channels around the U.S. For the New York Times articles, please see: <http://www.nytimes.com/2005/01/11/national/11cnd-slide.html> and <http://www.nytimes.com/2005/01/11/national/11mudslide.html>

The AMS conference was a big success for NASA this year. For more information about the AMS meeting,

please visit on the Internet, <http://www.ametsoc.org/AMS/> ■

Credit: NASA



Annual average global warming by the year 2060 simulated and plotted using EdGCM.

NOAA Photo Library; OAR/ERL/NSS



Multiple cloud-to-cloud and cloud-to-ground lightning strokes caught using time-lapse photography during a night-time thunderstorm.

## 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 (CPSC) along with web site links for retrieving further information on the recalls or alerts.

New Federal Web Site for Agency Recalls: <http://www.recalls.gov>

CPSC, Robertshaw Controls Company Announce Recall of Certain Models of 7000 Series Gas Control Valves.

<http://www.cpsc.gov/cpsc/pub/prerel/prhtml05/05073.html>

CPSC, Research Products Corp. Announce Recall of Electronic Air Cleaners.

<http://www.cpsc.gov/cpsc/pub/prerel/prhtml05/05090.html>

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## NASA GISS Scientists Win Scientific American Top 50 Award

Dr. Gavin Schmidt and Dr. Drew Shindell of NASA's Goddard Institute for Space Studies (GISS) simulated the Earth's atmospheric chemistry from millions of years ago in an effort to understand what could happen to the Earth's climate in the future. Scientific American noticed their work and honored them in November with the Scientific American Top 50 Scientist Award. Annually, Scientific American recognizes outstanding acts of leadership in science and technology from the past year. This is the first time that NASA scientists have made the list.

55 million years ago, during what is called the Paleocene-Eocene Thermal Maximum, global temperatures spiked signifying a global warming. Environmentalists and scientists believe knowing more about this prehistoric event is useful to understanding the process of global warming, and how our climate may change in the future.

Scientists speculate that the Paleocene-Eocene Thermal Maximum was caused by an eruption of methane from the ocean floor. The gas apparently seeped into the atmosphere from frozen deposits along the continental shelves in the ocean.

Looking at recent data, scientists noticed increasing global temperatures and methane emissions during the past 100 years. This time around the ocean is not responsible for significant increases in methane emissions. Instead, staples of our culture such as rice cultivation, livestock farming, and natural gas production are responsible for the current increase. "Methane changes that are man-made are having an affect on climate even today, and trying to understand what they are going to do in the future is of crucial importance," said Schmidt.

Schmidt and Shindell are investigating climate change so that they, and other scientists, may predict what may be in store for our world in the future. Their goal is to model and match climate changes in the last few hundred years with what scientists have observed. Their models suggest that methane has played a significant role in climate change in the past and may continue to do so in the future if methane emissions continue to increase. Schmidt and Shindell's research is important to scientists and environmentalists interested in preparing for the future.

This year, these scientists are part of that Scientific American's annual honor. The list of the top 50 Scientists of the Year is broken down into a number of categories. Schmidt and Shindell were cited for their work in the environment category.

Despite the honor, both researchers down play their work with the Paleocene-Eocene Thermal Maximum. They believe their other studies, such as their models of current climate change, are equally or more significant.

For more information on these scientists:

[http://www.nasa.gov/vision/earth/everydaylife/sa\\_top50.html](http://www.nasa.gov/vision/earth/everydaylife/sa_top50.html)

To learn about the work that these scientists do, please visit the NASA GISS website: <http://www.giss.nasa.gov/>

For more information about Scientific American, please visit:

<http://www.scientificamerican.com> ■

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# NASA's Science Data Could Fill Library of Congress 300 Times

By Lynn Chandler

The largest scientific data system on the planet, the Earth Observing System Data and Information System (EOSDIS), is providing users around the world with unprecedented access to huge amounts of important information about the Earth's environment. Five years after the launch of the flagship satellite, Terra, the current volume of available data is 4 petabytes (4 followed by 15 zeros), the equivalent of a DVD movie with a running time of more than 160 years or the equivalent of enough information to fill the Library of Congress 300 times.

The EOSDIS supports a diverse customer base of over 17,000 users, including researchers, federal, state, and local governments, the commercial remote sensing community, teachers, museums, and the general public. The EOSDIS stores environmental measurements collected from over 30 satellites, including NASA's EOS satellites (e.g., Terra, Aqua, Aura, ICESat).

These satellites provide images of the entire surface of the Earth every day as well as three-dimensional information about the atmosphere up through the stratosphere. They are capturing amazing geological events, as well as building a long-term database to provide scientists with important information needed to understand how our planet's environment may be changing, including:

- one complete 11-year solar cycle
- extended ozone-hole information
- El Nino and La Nina observations
- volcanic eruption aerosol and ash data

Each day, the equivalent of roughly 44 days of the above referenced DVD movie (3 terabytes) are distributed to users, and 66 days (4.5 terabytes) of new data are added to the archives.

"The EOSDIS has been a boon to the Earth science research community", said Dr. Carl A. Reber, the EOSDIS Project Scientist. "The availability of, and relatively easy access to, all these data are facilitating unprecedented studies into land and ice cover, the oceans and the atmosphere, as well as encouraging steps toward multi-discipline investigations utilizing information from all the above disciplines."

The EOSDIS has been implemented, and is managed by, NASA's Goddard Space Flight Center in Greenbelt, MD. For more information on EOSDIS, visit: [http://romulus.gsfc.nasa.gov/eosinfo/EOSDIS\\_Site/index.html](http://romulus.gsfc.nasa.gov/eosinfo/EOSDIS_Site/index.html) ■

## February is American Heart Month

Cardiovascular disease is the single greatest cause of death in the United States each year. According to Injury Facts® (2003), it was responsible for more than 2,406 deaths per day - that's nearly one cardiac death every two minutes!

For over 40 years, Congress has designated February as American Heart Month. Please join the battle this year to recognize and fight heart disease in your work place, home and community. You can make a difference. Learn how to reduce these deaths through prevention, education and emergency response training.

### Prevention

**Good News:** Heart attacks are almost entirely preventable. 75% of American adults already show traces of dangerous fat in their arteries that contribute to cardiac arrest. To protect yourself from heart disease follow these guidelines:

- Maintain a healthy and balanced diet
- Exercise regularly for at least 20 minutes, 3 times a week
- Avoid preventable risk factors such as stress, smoking and high blood pressure

### Education

#### Learn the warning signs - early detection saves lives.

Half of all heart attack victims wait more than two hours before seeking help. If symptoms are recognized and treated sooner, fatality rates drop drastically. If you or someone you know has chest discomfort for more than two minutes, call emergency medical services immediately. The following symptoms are warning signs of cardiac arrest:

- Pain or discomfort centered in the chest area, which may radiate to left arm, neck, back or jaw
- Sweating and shortness of breath
- Nausea or vomiting
- Dizziness or fainting
- Palpitations or rapid heart beats

For additional information: <http://www.nsc.org/issues/heartmonth.htm>

Source: Chesapeake Region Safety Council and the National Safety Council

### Other resources:

<http://www.americanheart.org>; [http://www.cdc.gov/cvhd/announcements/american\\_heartmonth.htm](http://www.cdc.gov/cvhd/announcements/american_heartmonth.htm) ■



# Employee Spotlight

By Dewayne Washington



## The Beauty Up There Inspired Her Career Down Here

For many of Goddard's community members, coming to work each day is to enter through the gates of exploration, joining the continuing efforts to dream, hope and uncover new realities. For some, it is an appreciation for the beauty and wonderment of what is out there that inspires this international trek that appears to have existed for as long as humans have looked above.

One Goddard community member, Felicia Jones-Selden, readily admits her desire was launched years ago when she began to simply gaze into the night sky. "I remember looking up at the stars as a child and seeing the simple beauty in that. Seeing the orange glow of the rising sun, observing that simple beauty and realizing this is our universe," says the current Associate Division Chief for the Instrument Systems and Technology Division (ISTD) within the Applied Engineering and Technology Directorate (AETD) at Goddard.

The Baltimore native admits that during her middle and high school years, she would always score high in math and science. "My mom and I talked about a career as a doctor or possibly a mathematician," said Jones-Selden. Following graduation from Western High School, she was accepted at the University of Maryland, Baltimore County (UMBC) to major in chemistry studies and biology.

She did well and received a one year fellowship in chemistry at the University of Oklahoma to do research. But, it did not take long for Jones-Selden to realize that chemistry was not the science for her. An acceptance letter to medical school and a talk with her mother about a different career path, awaited her return to Baltimore.

"My mom was upset to hear that I wanted to change my career, and insisted that I present her with a plan," said Jones-Selden. Her plan was an ambiguous one and would require even more discipline and hard work. To finance her new venture, the plan was to accept a night position as a medical lab technologist at John Hopkins Hospital. She would then have to make the drive to Washington, D.C., to attend day classes at Howard University and endure the rigors of fulfilling the requirements for a Bachelor of Science degree in mechanical engineering.

While some might see this plan as overwhelming, she had apparently been pre-disposed to hard work because of her grandfather. She admits that he had a major influence on her life, often sharing the family tree stories of struggle and

success. She still has copies of her grandfather's letters about his life in North Carolina as the son of a slave.

"If I could teach my people anything, it would be that all people ain't bad," recalls Jones-Selden of a statement she often heard from grandfather in her early years. There were other declarations as well. She has permanent records in the form of letters he wrote years ago about the treatment by slave owners of their property, her great-grand father.

With a determination to make it happen, Jones-Selden graduated from Howard University with a Mechanical Engineering degree and was recruited by the General Electric (GE) Company in Cincinnati, Ohio. Three years later she wanted to come home, not just to Maryland but to Goddard.

"I remember passing the Goddard gates while attending UMBC and telling my mom that this was the place I was going to work one day," said the 2003 recipient of the NASA Medal for Exceptional Service. Before accepting the position at GE, she had interviewed at Goddard. So, she knew who to call at the Human Resources office to inquire about possible job openings.

He was no longer there but Dillard Menchan had been hired as his replacement. He was able to assist her efforts which lead to a position in the thermal engineering branch in 1988. She

has continuously climbed the ladder of success, and along the way, earned a Master of Arts degree from John Hopkins University.

She currently oversees an organization that includes more than 180 people and has been a key component to many of Goddard's success stories. She has been influential for strategically reforming Goddard's instrument management and instrument systems engineering processes to enable innovation in scientific proposal generation, instrument development and technology infusion.

"I love my work because it involves leading edge technology and the trying of things that have never been done," said Jones-Selden. She used the Infra Red Array Camera (IRAC) project as an example. "That was the hardest project I have worked on since being at Goddard. It was one of those projects that can make or break a career. For me, it seemed to be a 24

Photo by Chris Gunn/293



Felicia Jones-Selden

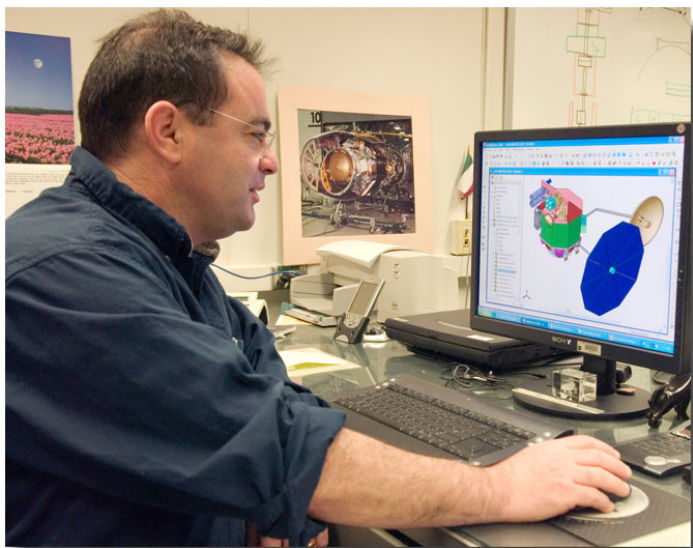
# Goddard Contributes to National Vision for Space Exploration

By Goddard Public Affairs

## Lunar Reconnaissance Orbiter

When you mention the word Lunar at the Goddard Space Flight Center, employees get a pep in their step. The excitement of working on the first moon mission, in decades is a dream come true for many who thought they would never have the opportunity. One such employee is Giulio Rosanova. Rosanova is the mechanical systems lead engineer for the Lunar Reconnaissance Orbiter (LRO) mission. As part of his duties, he manages the design and development of the LRO mechanical/structural system.

Photo Credit: NASA



Giulio Rosanova, Mechanical Systems Lead Engineer for the Lunar Reconnaissance Orbiter (LRO) looks at a computer model of LRO.

"I always wished I could have worked during the Apollo era when things were highly unknown, risky, and rushed", said Rosanova. "I thought that I would never get the chance to work on anything as exciting as going to the Moon. I thought I was born a few decades too late, but now with LRO I have the chance to closely realize my dream."

The LRO mission is scheduled to launch in the fall of 2008 as part of NASA's Robotic Lunar Exploration Program. The mission will deliver a powerful orbiter to the vicinity of the Moon to obtain measurements necessary to determine future robotic and human landing sites. It also will identify potential lunar resources, such as water and ice, and document aspects of the lunar radiation environment relevant to human biological responses. Lastly, LRO will provide topographical surface mapping. Very exciting stuff indeed.

"I liken LRO to Robert Goddard building the first liquid rocket. That's how excited I am to be working on this mission," he added.

Around the walls of Goddard, people can be heard saying "Moon Here We Come.", with faint echos of "MARS OR BUST."



## Exploring the Universe

Sometimes a star explosion is felt all the way across the cosmos. Craig Markwardt, a researcher at NASA's Goddard Space Flight Center, studies the biggest explosions in the Universe, called gamma-ray bursts. Some of these bursts are likely from the explosions of stars over 10 times more massive than our Sun. They originate billions of light years away. And when they blow, they leave a lot of debris and likely a new black hole in their place.

Dr. Markwardt works with the Swift satellite, a new mission dedicated to the gamma-ray burst mystery.

Swift will help to determine the dynamics of these massive explosions, such as the types of chemicals created. All the elements needed for life -- such as oxygen, iron and nitrogen -- are created in stars and star explosions. Gamma-ray bursts may propel these chemicals into space. Gamma-ray bursts reflect the lifecycle of matter, from the death of a star to the creation of new elements needed for life.

"Gamma-ray bursts inform us of how the forces of gravity and radiation create powerful explosions." Markwardt added, "but they also help us understand how stars like our sun are born and live their lives."

## Exploring the Earth

NASA's vision of exploration of the universe begins here on Earth. The Agency operates 19 Earth observing satellites, enabling scientists to study how land, water and air interact and affect Earth's weather systems and climate. "There is still a lot of exploration that needs to be done on our own planet," said Marshall Shepherd, NASA Earth Scientist.

Photo by Chris Gunn/293



Dr. Shepherd, research meteorologist studies Earth's atmospheric process, contrasting them to other planets' to gain a better understanding their weather and climate change.

Shepherd is a research meteorologist at NASA's Goddard Space Flight Center.

He studies hurricanes, thunderstorms and atmospheric processes and relates them to larger issues regarding weather and climate change. Knowing more about our own planet aids



# Former Center Deputy Director Shares Lessons Learned

By NASA Academy of Program and Project Leadership (APPL)  
*ASK Magazine*

**AURA IS AN EARTH**-observing satellite developed to help us study the quality of the air we breathe. It will look at the state of the ozone and the atmospheric composition in regards to the Earth's changing climate.

I headed to California on July 5, 2004. The plan was that the satellite would launch on the tenth, but we had a few problems getting it off. This was the fifty-ninth launch of my career, and it was also a little different than most of my previous launches. Most of the time it's weather that postpones a launch; there aren't usually that many technical issues this late in the game. This time, however, we had several problems, equally split between the launch vehicle and the spacecraft. I remember a member of the crew asking me, "Is this normal?" And in my experience, it wasn't.

## A WRENCH IN THE WORKS

We had three significant spacecraft issues during the launch campaign. These problems, together with the launch vehicle problems, ended up postponing the launch five days. During that time, the mission management team met eleven times at all hours of the day and night to try to sort things out. I myself held four special reviews.

The first problem was that some tools had been misplaced during final spacecraft closeout, which could present a problem if they were left on the spacecraft during launch. A wrench was lost and then found. Then we realized that we had also lost a flashlight.



As Deputy Director at NASA's Goddard Space Flight Center, I was responsible for overseeing the launch of the Aura spacecraft from atop a Boeing Delta II rocket out of Vandenberg Air Force Base in July, 2004.

The first step to solving this problem was interviewing everyone who had been involved with getting the spacecraft ready for launch. This was a massive effort, even extending to people overseas. Then we were able to make a timeline of activity based on photographic evidence, which were time-tagged and fairly easy to review. Through these measures, we were able



to limit the possibility of the flashlight's whereabouts to an area that made up about 10 percent of the spacecraft.

## THE LIKELY STORY

We were able to determine that the flashlight had last been seen on a processing table. Something called scrim, which is a plastic covering that is taken off the fairing during its installation on the launch vehicle, had been put on the table. The flashlight was also on the table, and it was probably swept off with the trash. We even checked the dump, but the search was futile.

Based on all the evidence and interviews, we were able to put together a story that convinced us that the flashlight was not on the spacecraft. What was really frustrating, however, is that all of this investigation could have been avoided. I found out that there was someone along the way who had noticed immediately that the flashlight had been misplaced. It was a week before they finally came forward, and by that time, the trail was cold. The person didn't speak up, because he was initially afraid to report it. I realized that there needs to be a clear message sent on this type of thing: no one is going to get in trouble for calling our attention to potential problems. It's the kind of behavior that we need to encourage.

## SHAKE, BUT NO RATTLE

The second problem had to do with a transistor failure in another program. A nickel-plated transistor can had been improperly cleaned, and this created the possibility of particles being generated inside the can. As long as they were smaller than about two thousandths of an inch, we wouldn't have a problem. But particles were reported to be larger than that.

The screening technique for this type of problem is to vibrate the transistor and listen for particles rattling around. This process is able to detect particles down to one thousandth of an inch. But the parts reported as having particles larger than two thousandths of an inch had passed this test. One of the team members said that the noise should sound like "an acorn in a coffee cup" if it were that large, but there was no noise.

I asked to push back the launch date in order to figure out the problem. It wasn't a popular decision, but I felt it was a necessary one. I was able to facilitate a discussion between our parts and materials engineers and those from the program.

**Continued on page 12**



## Lessons Learned (cont'd from page 9)

I got Michael on the net and asked him to explain his opinion about the problem and his reservations. It turned out that he had seen the problem in the test program, but no one was worried because it hadn't set off any alarms. While he was explaining, there were other people on the net that kept saying we needed to go ahead with the launch. As the conversation progressed, I could feel him getting pressure from the rest of the team and begin to change his mind. I again made the unpopular decision to delay the launch until the issue could be ironed out.

So after speaking to Michael, I went to find out more about the problem, and to talk to my team about possible solutions. Since the problem was on both the A and B sides of the recorder, and in the same word and memory section on each side, we determined that if this became a frequently recurring problem, we would be able to bypass that section of memory and work around it. It sounded like a viable option.

But since Michael was the only one who had been concerned about the problem, I wanted to consult with him before moving forward. He was working the second shift and was asleep. I got him out of bed to hear the solution and to see what he thought of it. He believed that it was airtight. I really felt like this situation was very similar to what had been outlined in the CAIB report: when minority opinion isn't valued, people are afraid to speak up, and they end up giving in to conformance pressure even though they know there's a problem. So I wanted to make sure that I took the time to hear the dissenting opinion.

### AND PATIENCE IS REWARDED

In the end, we launched on July 15, 2004. We managed to work around each of these issues, mainly because we cracked them wide open each time. There's a personal motto I've adopted from the wine industry, and I take it with me to each launch. That motto is "No launch before its time." It's the job of the management not to get caught up in the "launch fever" that accompanies the last few hours before liftoff. If there is an issue, no matter how small, it needs to be brought to the table and dealt with. The problem needs to be investigated, the risk needs to be evaluated, and sometimes the best decision is to postpone. Better to hold off five days—or if necessary, even longer—and be sure of success, than be on-schedule with failure looming in the background.

### LESSONS

- In dealing with potential problems, it is essential to get to the bottom of technical questions and understand why things work, not just why they don't work.
- It is important to hear, evaluate, and respect minority opinion, as well as to protect that minority from the conformance pressure of the majority.

### QUESTIONS

How can you foster a project environment in which people are not afraid to speak up immediately when they notice that there is a problem? ■

## Jones-Seldon (cont'd from page)

hour, seven days-a-week project for five years," said the 2004 recipient of the Group Achievement Award for work on IRAC.

"But as with any project, it was the team members, the NASA Goddard family that turned that project into a success, and that interaction is what I enjoy of any project," said Jones-Seldon. "I don't know if I could get that at any other place." The recipient of 2004 Exceptional Achievement Award has also worked on other well known NASA projects that include the first Mars Observer, TOMS, and TRMM.

Photo by Chris Gunn/293



Interaction is what I enjoy of any project," Felicia Jones-Seldon.

"Yes, I know her really well and think her story is a story that should be told," stated Dillard Menchan, when asked about Jones-Seldon. "She has been a great asset to Goddard while taking on the added responsibilities of motherhood. I think she is to be commended for excelling at both."

While she has never had to compromise her work, this mother of three acknowledges that being a mom has always been her number one priority. To relax she talked about get-a-ways to New York to see a Broadway show with her husband every now and then. "My family and I love to get away to Williamsburg during the summer, we really love those water rides," she added. Reading, swimming and running are also on her fun list of things to do. When asked how far she likes to run, "I never do more than ten miles," she said with a laugh.

"My kids know me well and often if they see something in the night sky they will say hey mom, look up there," she said with a big smile. "We often have discussions about what is up there." She enjoys doing public outreach; in particular at schools discussing NASA's many ongoing missions and activities.

So it appears that her aspiration to explore what is out there has inspired a next generation to at least take notice of a beauty she has treasured for years. An observance that has inspired her to join a select group that has chosen life's work of extreme challenges and extreme accomplishments for all mankind. "Exploration is not an option we choose. It is a desire written in the human heart," President Bush, 2004. ■

## Vision (cont'd from page 10)

newest Earth observing satellite, called Aura, focuses its suite of powerful instruments on the Earth's atmosphere. This new observatory will help us better understand and protect the air we breathe. Said Dr. Shepherd, "As we start exploring our neighboring planets it is important to remember that the Earth is also fascinating and ever changing planet."

Photo by NASA



Student, Aimee Lemieux is excited about working on the balloon development project

### Planetary Ballooning

The spacecraft descends into the Martian atmosphere, but the scientific instruments never reach the ground. Just as planned, a balloon deploys from the descending spacecraft, carrying the instruments to study the Martian atmosphere and landscape over vast areas of the planet. While such a mission is years away, cooperative education student Aimee Lemieux at the Wallops Flight Facility is helping make that dream a reality.

"The balloon development project is an exciting project for anyone who has dreamed of going to space," said Lemieux, "Having a significant part in sending something to another planet is as exciting as becoming an astronaut."

"The possibilities that can arise from this project are endless; from developing the technology for planetary balloon to discovering new and interesting information about other planets. Being a part of a cutting edge project is exhilarating and stimulating. I'm more excited to continue studying balloons, especially planetary balloons, and their dynamics than ever before," she said.

Deployment Experiments for Ballooning On Mars (DEBOM) is one of the first steps on the path to planetary ballooning. Small balloons (1 meter in diameter) were released and inflated at low altitudes so experimenters could evaluate a variety of designs, as well as see the entire inflation process. Results and recommendations from these experiments are now being used in scaled-up versions of the balloons at higher altitudes. Eventually, stratospheric experiments will be completed with 20 and 30 meter diameter balloons. These studies will go to developing the balloons and inflation methods utilized on planetary balloons.

The mechanical engineering graduate student at the Rochester Institute of Technology in New York, said, "I'm in a unique situation where I've been able to switch between the professional world and the classroom. This has allowed me to integrate the benefits of both into a single comprehensive and industrious project with a multitude of potential."

One day the work of this student will lead us to expanding our exploration capabilities on Mars and other planetary bodies.

### Searching for Life on Mars

Little green men are probably not governing Mars, but NASA's Goddard Space Flight Center, Dr. Paul Mahaffy hopes to discover

whether some form of life once existed, or exists, on the Earth's closest neighbor. In 2009, another Mars Science Laboratory rover will return to the surface of Mars carrying the Sample Analysis at Mars (SAM) suite on board. The mobile chemistry laboratory will look for organic molecules that signify life.

Photo by NASA



Dr. Mahaffy looks forward to having the Mars Science Laboratory rover go to Mars looking for signs of life. "How could a mission be more appropriate to NASA's Vision of Exploration."

"It is fabulously interesting stuff, the key question having to do with whether there was or is life in other places of the solar system", said Dr. Paul Mahaffy, science mission manager with NASA Goddard Space Flight Center. "How could a mission be more appropriate to NASA's Vision of Exploration? It involves acquiring knowledge and the exploration of a new world."

Spirit and Opportunity discovered traces of liquid water on the surface of the planet. The 2009 SAM investigation will consist of a Gas Chromatograph Mass Spectrometer (GCMS) constructed at Goddard and a Tunable Laser Spectrometer (TLS) from JPL. The Rover may still find some type of Martians, even if it's nothing like what is portrayed in science fiction. ■

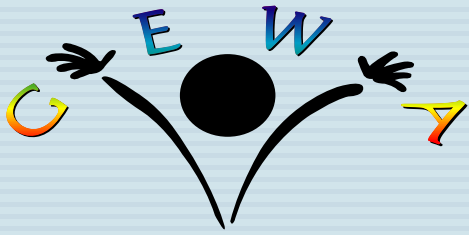
## CREAM Flight (cont'd from front page)

Personnel from the National Scientific Balloon Facility, Palestine, Texas, conducted the launch, flight and recovery operations of the CREAM balloon mission. "We are really proud of our crew in Antarctica," said Danny Ball, Site Manager of the Texas facility. "Everyone at NSBF has contributed to this success, but the crew that spent Thanksgiving, Christmas, and New Years on the "ice" deserves most of the credit for a great mission and yet another record flight."

Antarctica ground and air operations support was provided by the National Science Foundation's Office of Polar Programs.

The CREAM experiment is a collaboration among the University of Maryland, the University of Chicago, Penn State University and universities and organizations in Italy, Korea, France and Mexico.

For pictures and information on the CREAM mission visit: <http://cosmicray.umd.edu/cream/CREAMflight.htm> ■



# GEWA Activities

## Goddard Bible Club

The Goddard Bible Club meets on Tuesdays at noon in building 21, room 242. We have both speakers and videos, details may be found in Dateline. You are welcome to eat your lunch during the meeting. If you have questions, please call Bill 6-7756.

## GEWA Art of Living Club Offers Free Guided Meditation Every Monday and Wednesday at Noon

Come and feel more peaceful and less stressed; be more focused and energetic - no training required! Our mental and emotional state affects those around us, and by culturing a state of mental stillness we bring that peacefulness into our environment, one mind at a time. There are some things that effort cannot accomplish. Meditation is the delicate art of doing nothing - letting go of everything and being who you are. It gives your mind such a wonderful rest. Come get a charge, and help make Goddard a better place to work. On Monday, we meet at 12:15 p.m. in bldg. 23, Rm S300, and on Wednesday, we meet at 12:00 noon in the same place. Please call Bill Hayden at 6-4267 or Chris Smythe-Macaulay at 6-2490 if you have any questions. For new folks, we will be there 5 minutes early for a quick orientation.

## The Irish Have Arrived! Dancing at Lughnasa - Opens

MAD's Winter show - Dancing at Lughnasa - opens on February 11, 2005 at the Barney and Bea Recreation Center. The show runs each weekend - Friday, Saturday, and Sunday - from February 11th through the 26th. This charming story takes place in Ireland where five unmarried sisters are living on a rugged farm outside of Ballybeg in the 1930's. The play deals with the tides of change in which the old world meets the new, the old versus the young, and the familiar versus the different.

Celeste MacMillan as Kate; Carole Long as Maggie;  
Kathryn Johnson as Agnes; Barbara Lambert as Rose;  
Ellyne Kinney as Chris; Robert Schaefer as Michael;  
Brendan Perry as Gerry; Alan Centa as Father Jack

To order or inquire about tickets, call the MAD Ticket Sales Line at 240-475-8800.

For more information about the show (cast, ticket prices, times etc), visit the MAD web site at <http://www.madtheater.org/> and click on "Sales flyer is here" link below the show logo.

## Goddard Slow Pitch Softball Association (GSPSA) New Teams and New Players Welcome!

The softball leagues are preparing for the upcoming season, and would like to extend an invitation to any new teams or players to join the GSPSA. The leagues are open to all civil servants and contractors working on a NASA contract, and/or their immediate family members (spouse, siblings, or children, 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 officiated by Goddard umpires. All skill levels are represented on the various teams, and the games are competitive, but fun. The GSPSA 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 (GSPSA President) or Walt Moleski (GSPSA 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.

## Wanted: Slow-pitch Softball Umpires

The Goddard Slow Pitch Association (GSPSA) is looking for new umpires to fill out our existing roster. Even if you have never officiated before, if you are willing to learn, I can teach you the rules and how to umpire. If you are experienced - all the better. League play starts in late April and goes thru August. You need to be able to commit to either a Monday/Tuesday/Wednesday night for most of the season. The games are played at the Beaver Dam complex off Soil Conservation Road starting at 5:30 p.m. Pay is \$18/game payable at the end of each month. If you are interested, contact:

Frank Stocklin 301 286 6339 or [Frank.J.Stocklin@nasa.gov](mailto:Frank.J.Stocklin@nasa.gov).

Please go to <http://gewa.gsfc.nasa.gov/SpecEvents/> for more information.



# Announcements

## Wallops Flight Facility Intranet Now Available

The NASA's Wallops Flight Facility (WFF) has an internal Web site available for all employees' use. This Web site is designed to provide a "one-stop portal" that includes many professional and administrative references throughout the government, agency, and facility for employees. It includes quick links, internal facility and employee news, as well as links to employee services, a facility event calendar and other NASA intranets, among the many other informational links. Also available at this site are very useful search tools for acronyms and for employee/organizational information (both NASA-wide and internal to Wallops). The WFF Intranet should allow users to reduce those long lists of bookmarks, and you can access this throughout the agency internally at: <http://internal.wff.nasa.gov/> Visit the site today!

Feedback is welcome and may be directed to any of the following: Sandy Kleckner, x7-1929, Lisa Bass, x7-1202, or Rayce Shelton, x7-1757

### Looking for Goddard's Internal Page?

The Goddard internal page still exists and can be found at <http://internal.gsfc.nasa.gov>. The internal page is a good source of the latest happenings at Goddard. Links are accessible to colloquia's, seminars and events. In addition, there are useful links to Goddard's organizational chart, employee services, NASA Initiatives and much more. Bookmark this site for easy access in the future.

### Volunteers Needed

**What:** North County High School needs judges for Science and Engineering Fair. It is that time of year - time for the Science Fair! Why don't you volunteer to judge this year's science fair? That's right - actively participate in one of the main activities that make science students choose science as a career. See how these hardworking students have done and share in the excitement. If you are a college student, you can see how high school freshmen are excelling in science. Many college students volunteer their time to judge science fairs. The results of this judging will send the top students and projects to the county competition in March.

Image of new Wallops Intranet

**When/Where:** Wed, Jan. 19, 2005 at North County High School, 10 E. First Ave., Glen Burnie, MD 21061 in the media center from 7:45 a.m. to 2p.m. You can choose:

Shift A - 7:45 a.m. to 10:30 a.m.

Shift B - 11 a.m. to 2 p.m.

If you are willing to help out, please contact Stacie Forman, Science Fair Coordinator via e-mail - [MrsFormanBiology@aol.com](mailto:MrsFormanBiology@aol.com) or [Sforman@aacps.org](mailto:Sforman@aacps.org) or Phone - 410-222-6970

### Dateline Newsletter

The Dateline Newsletter is a daily bulletin that highlights current GSFC events and announcements. The newsletter is e-mailed daily to subscribers only. To subscribe to Dateline send an e-mail message to [Majordomo@listserv.gsfc.nasa.gov](mailto:Majordomo@listserv.gsfc.nasa.gov) in the text area type subscribe dateline\_daily\_copy and within a few days you should start receiving dateline. To submit announcements direct e-mails to [dateline@listserv.gsfc.nasa.gov](mailto:dateline@listserv.gsfc.nasa.gov) For more information, contact Natalie Simms at x6-8955.

### Want To Challenge Students to Focus On Their Futures?

The Maryland Business Roundtable for Education needs volunteers from the working world to participate in its nationally renowned Speakers Bureau. The Bureau is part of a comprehensive program that informs and motivates middle and high school students about the rigorous coursework they will

need to take and complete while in high school in order to succeed in the future, whether they go on to college or directly Chapel Hill Elementary School, located in the northeastern part of Baltimore County. I sent you an email last week, but thought I would try again this week. I would like to ask if you have anyone there who is willing to volunteer to serve as a science fair judge at our Second Annual Science Fair this year. The fair is to be held on March 18th, from 9:00 a.m. -- 12:00 p.m. We

Volunteer speakers are asked to commit to making 3-5 classroom presentations. Before entering the classroom, they are equipped with a lesson plan and receive 3 hours of training on facilitating the Achievement Counts presentation. The messages they deliver are based on their own personal and work experiences, with each speaker bringing his or her own unique perspective. If you are interested please contact Charles Mercer at 301-286-7478 or by email at [cmercer@pop100.gsfc.nasa.gov](mailto:cmercer@pop100.gsfc.nasa.gov) so we can set-up a training session for employees here at Goddard.

To sign up to be a speaker visit our website: <http://www.mbrt.org/speak> or contact LaTara Harris at 410/727-0448 or [latara@mbrt.org](mailto:latara@mbrt.org).

### Science Fair Judges Needed

Judges are needed for the Science Fair at Chapel Hill Elementary School located in the northeastern part of Baltimore County at 5200 E. Joppa Rd., Perry Hall, Md. on **Mar 18**, 2005 from 9:00 a.m. to 12:30 p.m. If you are interested in being an judge for this event please contact Anne Bloom at 410-887-5119 or by email at [ebloom@bcps.org](mailto:ebloom@bcps.org).

Davidsonville Elementary School is having a science fair on **April 4**, 2005 from 8:30 to 11:30 a.m. For more information see the URL: [http://www.aacps.org/aacps/DAVES/science\\_fair.htm](http://www.aacps.org/aacps/DAVES/science_fair.htm)

2005 Arundel County Regional Science and Engineering Fair. The fair will take place on Saturday **March 12**, 2005 at the South River Senior High School; 201 Central Ave. East; Edgewater. If you are interested please contact Valerie Wesner at 410-222-5447 or by email [vwesner@aacps.org](mailto:vwesner@aacps.org). Please respond by February 22, 2005.

Science Fair Speaker wanted at Barrie School on **April 29**, 2005. Located at 1300 Layhill Road; Silver Spring, Md. For further information contact Velma Anderson at 301-805-3442 or by email at [Velma.Anderson@Honeywell-TSI.com](mailto:Velma.Anderson@Honeywell-TSI.com)

Career Day and Career Expo for Greencastle Schools. On **March 22**, 2005 for the Middle School and **April 19**, 2005 for the High School. Also they looking for a luncheon speaker as well on April 19th after the Expo. If interested please contact Kate White-Deater at [kedeater@greencastle.k12.pa.us](mailto:kedeater@greencastle.k12.pa.us).

### GSFC Software Assurance Website Launched

The Goddard Space Flight Center (GSFC) Software Assurance Website <http://sw-assurance.gsfc.nasa.gov> provides tools, procedures and training materials for software and safety assurance personnel, software engineers, as well as program and project managers.

Practitioner assets can be found for each of the five Software Assurance disciplines, including:

- \* Software Quality
- \* Software Reliability
- \* Software Safety
- \* Software Verification and Validation
- \* Software IV and V

For more information, please contact Susan Sekira (mailto:[Susan.J.Sekira@nasa.gov](mailto:Susan.J.Sekira@nasa.gov)) at 301-286-6160, or visit the website at <http://sw-assurance.gsfc.nasa.gov>.

### Register for the NASA Aeronautics and Space Database

The NASA Aeronautics and Space Database is the Scientific and Technical Information (STI) Programs new repository for documents relevant to NASAs mission. From your own workstation, you have free access to over 3.5 million metadata records that include citations and abstracts of NASA journal articles, technical reports, conference papers and proceedings, preprints, theses, and other forms of STI. Content ranges from the early NACA publications to today's latest research. Innovative features include full-text images in PDF format, custom display formats, saved search capability, and on-line document and video purchase. Register for free at [www.sti.nasa.gov](http://www.sti.nasa.gov).

### Goddard Referral Service

Looking for information on issues such as adult care, child care, legal or financial assistance, health & wellness, or education, but don't know where to start? Let Goddard's Referral Service do the work for you! This service includes a website as well as specialists available 24 hours a day/7 days a week - whenever the need arises. Check it out at: [www.worklife4you.com](http://www.worklife4you.com), and enter the following information: Agency Code: GSFC; password: last name + last 4 digits of SSN. Don't worry - the site is very secure & you're information remains confidential. Please contact Khrista White at X6-9059, [khrista.n.white@nasa.gov](mailto:khrista.n.white@nasa.gov), or <http://ohr.gsfc.nasa.gov/family/home.htm> for assistance.

# Events

## Scientific Colloquia

All colloquia are held on Fridays in building 3 Goett Auditorium at 3:30 p.m. unless otherwise noted.

**Who:** Dr. Micheal Flaser, Goddard Plantery System Branch will discuss *CIRS/Cassini First Results from Saturn*

**When: Feb. 11**

**Who:** Dr. Siegfried Schubert, Goddard principal investigator for Earth Observing System will give insight *On the Cause of the 1930's Dust Bowl Drought*.

**When: Feb 18**

**Who:** Micheal Mumma, senior scientist, Goddard Laboratory Extraterrestrial Physics will discuss *Methane on Mars*.

**When: Feb 25**

## Engineering Colloquia

All Engineering Colloquia are held in Bldg 3 Goett Auditorium at 3:30 unless state otherwise

**Who:** Dr. Judah Levine, physicist in the Time and Frequency Division of NIST will begin by discuss how the SI second is defined and how this definition is used to realize International Atomic Time (TAI) and Coordinated Universal Time (UTC). Levine will describe how time is transmitted, with emphasis on the general principles that are used to design these distribution systems.

**When: Feb 7**

**Who:** Dr. William H.F. Smith from NOAA will discuss *Satellite Altimetry, Tsunamis and Bathymetry from Space*.

**When: Feb 14**

**Who:** Jim Watzin, RLE program manager at Goddard will discuss *The Robotic Lunar Exploration Program (RLE)*. Watzin will provide a snapshot (RLE) program led by GSFC. RLE is critical to the new NASA Exploration Program and its vision to return humans to the moon by 2020, followed by a human mission to Mars before 2030. The first step in RLE is LRO, the Lunar Reconnaissance Orbiter, for which a preliminary design review will be held in June, 2005. The instruments for the LRO were finalized in December.

**When: Feb 28**

**Who:** Brian Appel, Chairman and Chief Executive Officer of Changing World Technology, Inc. will give insight on *Changing Garbage to Oil - Eliminating Landfill with a New Technology*. Changing World Technologies, Inc. (CWT) has developed the Thermal Conversion Process (TCP) which converts organic waste residuals and low value materials into marketable high quality clean fuels and specialty chemicals. The TCP provides a solution to many health, environmental and economic issues which result from waste disposal, animal disease, food contamination and natural disasters.

**When: March 7**

## Lunch and Learn

Healthy vs Unhealthy ways to Cope with the Stress in your Life. Most stress comes from the minor incidents that happen every day. The aim of stress management is not to eliminate stress entirely, but to control it so it works for you. Join the Employee Assistance Program in a presentation about how we can handle our stress. This will be a practical look at the unhealthy ways we commonly manage stress and an opportunity to learn some coping strategies that can improve our health and wellbeing.

**When/Where: Thursday, Feb. 17** from 12 to 1 p.m. in Bldg. 26 Room 212

## The Property Management Branch Auction

**What:** Property auction items include ADP Equipment; Misc. Testing and Electronic Equipment; Mainframe Systems; and many other misc. items.

**When/Where: Thurs., Feb 24** at the Goddard's Bldg. 16W Excess Warehouse at 10 a.m. Inspection will from 8 to 9:45 a.m.

## Center Director's Colloquium

All of the Center Director's Colloquia will held in the building 3 Goett Auditorium from 10 a.m. to 11 a.m. with afternoon group discussion at 2 p.m. in the bldg 1 training facility.

**Who:** Donna Strickland will explore how stress affects our body, mind, and spirit. You'll laugh while you learn how to use laughter to loosen up and build resilience. This fun, informative and exciting presentation explores both the science of laughter and the art of humor. You'll learn ways you can benefit from the exercise of laughter as a form of "inner jogging" - when to let go, and when to take action.

**When: Wed, March 2**

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



### Evening Scientific Colloquium

**What:** NASA's Goddard Space Flight Center will host the first of a series of free public lectures and discussions on cosmology and astrophysics, entitled *Eyes on the Sky: Peeking into the Universe's Past, Fathoming the Future*. In celebration of World Year of Physics 2005, the centennial of Einstein's miraculous year of discoveries, this event will feature some of the world's leading scientists and showcase NASA's cutting-edge scientific endeavors. Admission is free but on-line reservations must be made at <http://university.gsfc.nasa.gov/eyesonthesky/>. This colloquia series is appropriate for high school and college level participants.

**Who:** Mike Turner, Assistant Director for Mathematical and Physical Sciences for the National Science Foundation and University of Chicago Department Chair for Astronomy and Astrophysics will discuss *Beyond Einstein: Profound Mysteries and New Challenges*

**When/Where:** **Thursday, Feb. 10** at 7pm in NASA's Goddard Space Flight Center's Visitor Center Auditorium

### Information & Science Technology Colloquia

**Who:** Dr. Bernhard Steffen, founder and Editor in Chief of Software Tools for Technology Transfer (STTT), Springer Verlag will talk about *Behavioral Model Construction*. Automatically generated models may provide the key towards controlling the evolution of complex systems, may form the basis for test generation, and may be applied as monitors for running applications. After a short introduction to automata learning, the talk will focus on methods to increase its practicality. In particular, it will discuss applications specific optimizations, and illustrate their power along a realistic telecommunication scenario.

**When/Where:** **Wed, Feb. 9** in the Bldg. 3 Goett Auditorium at 3:30 p.m. (Refreshments at 3 p.m.)

**For more info, visit:** <http://isandtcolloq.gsfc.nasa.gov/spring2005/speakers/steffen.html>

**Who:** Karin Breitman, teacher and researcher at Departamento de Informática da Pontifícia Universidade Católica do Rio de Janeiro will discuss *Semantic Web Technologies: Challenges and Opportunities*. As the volume of information grows exponentially in the Web, researchers from industry and academia are now exploring the possibility of creating a "Semantic Web," in which meaning is made explicit, allowing machines to process and integrate Web resources intelligently. Central to this idea is the use of ontologies that provide a lingua franca, which allows machines to interact in a meaningful way.

**When/Where:** **Wed, Feb 23** Bldg 3 Auditorium at 3:30 p.m. (Refreshments at 3 p.m.)

**For more info, visit:** <http://isandtcolloq.gsfc.nasa.gov/spring2005/speakers/breitman.html>

### Nutrition for Life

Elizabeth Blumberg is a licensed nutritionist and registered dietitian specializing in preventive and therapeutic nutrition. In this presentation she will discuss why dieting doesn't work, and demonstrate how all of the foods you eat can fit into an overall healthy lifestyle. In addition, participants will discover the truth about many restaurant foods to help them make healthier meal (and portion) choices when eating out.

**When/Where:** **Thursday, Feb 24** from noon – 1 p.m. in Bldg. 26, room 212

Call the Health Unit with any questions and to register at 286-6666. Open to civil servant and contractor employees. Space limited to 45.

### Upcoming Training

#### Managing Your Success

Feb 8; 1:30-2:30 p.m.

For additional information please visit <http://ohrcoursecatalog.gsfc.nasa.gov/search/description.cfm?course=1322>

#### Individual Development Planning (IDP) for Employees

Feb 15 and March 17

Each workshop is scheduled to be held from 9:30-11:30 a.m. For additional info, please visit <http://ohrcoursecatalog.gsfc.nasa.gov/search/description.cfm?course=842> to enroll.

#### Switching Careers: How On Earth Do I Do It?

Feb 24; 1:30-2:30 p.m.

For additional information please visit <http://ohrcoursecatalog.gsfc.nasa.gov/search/description.cfm?course=1323> to enroll.

#### Effective Team Building Techniques

March 1; 1:30-2:30 p.m.

For additional information please visit <http://ohrcoursecatalog.gsfc.nasa.gov/search/description.cfm?course=1338> to enroll.

#### Time Management Techniques

March 10; 1:30-2:30 p.m.

For additional information please visit <http://ohrcoursecatalog.gsfc.nasa.gov/search/description.cfm?course=1248> to enroll.

Please visit <http://ohrcoursecatalog.gsfc.nasa.gov/search/search.cfm?search=2&category=1> for a complete listing of Professional Development Center workshops. You may also contact Tracey White at x6-7823 or [Tracey C. White.1@gsfc.nasa.gov](mailto:Tracey.C.White.1@gsfc.nasa.gov) to enroll in any of the listed courses.

#### One-On-One Career Coaching...

Whether you are contemplating a career change, in need of assistance with resume writing, interviewing techniques, or trying to develop an Individual Development Plan (IDP), a career coach can help. To schedule a confidential one-on-one appointment, contact Tracey White at x6-7823. This service is provided to civil servants only.

**Second Annual NASA Project Management Conference**

Project team members interested in learning new concepts during a full 2-days of high-quality, high-intensity professional interaction. Teach, learn, and network about Project Management. This conference includes:

- Major keynote speakers daily
- Highly informative speaker sessions
- Thought-provoking case studies
- Engaging panel discussions
- Innovative project management tool demonstrations

**When/Where: March 22-23, 2005** at the University of Maryland University College Inn and Conference Center College Park, MD

Conference website ([pmchallenge.gsfc.nasa.gov](http://pmchallenge.gsfc.nasa.gov)) still has the presentations from the 2004 Conference. Check back soon for the new 2005 website.

Contact Conference Chairpersons: Dorothy J. Tiffany - NASA GSFC 301-386-5917 Walt Majerowicz, PMP – CSC 301-286-5622

To add names to our mailing list: Sandy Adorney 301-286-3413

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