



National Aeronautics and  
Space Administration  
Goddard Space Flight Center

# GODDARD news

Greenbelt, Maryland/Wallops Island, Virginia

Feb. 1998 Vol. 2 No.5

The Goddard News is published weekly by the Office of Public Affairs, Goddard Space Flight Center, Greenbelt, MD 20771

## New Earth Science Exhibit Gallery at Goddard Visitor Center

Goddard employees and their families are cordially invited to attend a sneak preview of the New Earth Science exhibit gallery on February 12 at 3:00 p.m. at the Visitor Center. See our home planet as you've never seen it before. . . from 300 miles in space where NASA's EOS satellites look down on land, sea and air. Learn about our mission to understand our changing planet.

Take a self-guided tour of the Earth with interactive displays. See the ever-changing Earth in all its mystery and wonder in the science visualization theater. Check out the weather in your own backyard and around the world with NASA's real-time weather monitoring station. Special handouts will be passed out and refreshments served. Don't miss out on this special event!

Employees are also invited by Center Director, *A. V. Diaz*, to a special Ribbon Cutting Ceremony and Reception to be held at Goddard's Visitor Center prior to this sneak preview, on February 10 at 5:00 p.m.

The Public Grand Opening of the Earth Science Gallery Exhibit will be held on Saturday, February 14 from 9:00 a.m. to 4:00 p.m. The following activities will be held throughout the day:

- **Grand Opening Ceremony:** 12:00 - 12:30 p.m. - Special mementos will be given to the first 200 visitors. All participants will be entered in a prize drawing for framed limited edition Earth posters and crew lithographs signed by Space Shuttle Astronauts.

- **Earth Science Gallery Tours:** 12:30 p.m. until closing.

- **Children's Earth Art:** All day - Youngsters of all ages are invited to express their creativity at our Earth Art Station. Pictures will be displayed in the Visitor Center.

- **Goddard Jeopardy:** All Day - Test your knowledge of the Earth and our Environment through our version of the popular quiz-show. Prizes will be given for correct responses.

- **Take Home Science Explorations for Families:** All Day - Demonstration conducted at 11:00 a.m., 1:00 p.m., and 3:00 p.m. Conduct your own research into Earth Science. Activity packets for a variety of scientific investigations you can do at home will be available. Return the completed experiment to the Visitor Center and be eligible for a special "behind the scenes" tour of Goddard.

For additional information, call the Goddard Visitor Center at (301) 286-8981 or visit our URL at <http://pao.gsfc.nasa.gov/vc/vc.htm>

## Balloon Experiment Flies Over Antarctica

By Deanna Adams, Office of Public Affairs

Investigators from Goddard recently flew a compact radiation LET Spectrometer on a high-altitude helium balloon launched from Williams Field near McMurdo Station, Antarctica. According to the Principal Investigator, Dr. E. G. Stassinopoulos, this instrument spent ten days measuring the energy deposited by Galactic Cosmic Rays (GCRs) and solar heavy ions from Coronal Mass Ejections (CMEs) or solar flares (if present).

The purpose of the experiment was to accurately measure and obtain a precise definition of the Single Event radiation environment; to use the spectrometer data to verify and update Single Event environment models and rate predictions; to correlate failures/anomalies/effects on spacecraft and aircraft with the actual measured heavy-ion radiation; to assist in the identification of anomaly causes; and to provide warning for solar proton events.

The helium balloon used in the experiment was 29-million cubic-feet in size and carried the payload at an altitude of approximately 125,000 feet. The investigation team recovered the payloads on the Ross Ice Shelf.

## Activities To Celebrate Black History Month

February is Black History Month. In celebration of this National observance, Goddard is hosting a variety of activities sponsored by the Office of Equal Opportunity. On February 3, Pastor Shelton Kilby III presented "So Many Voices" which featured demonstrations with African instruments, vocal chanting and vocal solos to inspire and engender greater understanding for the language of the African American. Upcoming activities will be as follows:

- **February 9, 1998** - Mayor Kurt Schmoke, the celebrated and honorable mayor of Baltimore, Maryland, will present a lecture presentation on the topic of "Achieving Dr. King's Dream Through Education" in the building 3 auditorium from 2:00 - 3:00 p.m.

- **February 18, 1998** - Dr. Warren Farrell, the distinguished educator, author, teacher/trainer and lecturer will conduct a fun-filled and insightful 4 hour training presentation on diversity, gender and racial/ethnic issues and concerns in the building 3 auditorium. The format is an exciting audience interactive style where all participants can easily see, comprehend and understand the themes involved in discussions of diversity. The time will be from 12:00 noon to 4:00 p.m.

- **February 26, 1998:** The Bowie State University Choir will perform a rousing and stirring rendition of gospel and rhythm and blues music for your listening pleasure in the building 8 auditorium from 11:30 a.m. - 1:00 p.m.

For additional information, call (301) 286-7348 or if a sign language interpreter is needed.

## CURRENT news

- President Clinton's proposed budget for Fiscal Year 1999 includes \$13.465 billion for NASA. The budget includes full funding for the International Space Station and a new start for the Europa Orbiter.

- Dr. Ghassem Asrar, currently serving as the chief scientist for the Earth Observing System in the Office of Earth Science at NASA Headquarters has been selected as the new NASA Associate Administrator for Earth Science, Earth's land, oceans, atmosphere, ice and life.

- A Farewell Reception will be held for Joe Rothenberg on Thursday, February 12, 1998 from 5:00 p.m. until ?? at the Goddard Rec Center. Tickets cost \$12.00 and may be purchased from Natalie Nace, Code 100, Bldg. 8, Rm. 600, (301) 286-5152.

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To find out about other exciting news stories visit the Goddard Homepage at <http://www.gsfc.nasa.gov> and choose **FLASH**

## Center Reorganization Key Appointments

Based on the Center's Reorganization which took effect on December 21, 1997, the following Directorates, Divisions and key appointments have been established:

**Mr. Orlando Figueroa** was appointed Director of the Systems Technology and Advanced Concepts (STAAC) Directorate (Code 700).

**Dr. Michael Ryschekewitsch** was appointed Deputy Director. The STAAC organizational structure consists of the following offices and divisions:

1. NASA Technology Planning and Integration Office (Code 710) - **Mr. Gary Martin** was named Chief.
2. NASA SOMO Mission Services Office (Code 720) - **Dorothy Perkins** was named Chief
3. Systems Engineering Division (Code 720) - **Mr. James Andary** was named Chief
4. Mission Integration and Planning Division (Code 740) - **Mr. Thomas Magner** was named Chief
5. Technology Commercialization Office (Code 750) - **Mr. Wayne Hudson** was named Chief

**Mr. Brian Keegan** was appointed Director of the Applied Engineering and Technology (AET) Directorate (Code 500). **Mr. Carroll Dudley** was appointed Deputy Director of AET and **Ms. Krista Paquin** was appointed Associate Director. The following structures were established within AET:

1. Business Management Office (Code 501) - **Ms. Alda Simpson** was named Chief
2. Mechanical Systems Center (Code 540) - **Mr. Edward Powers** was named Chief
3. Instrument Technology Center (Code 550) - **Dr. James Mason** was named Chief
4. Electrical Systems Center (Code 560) - **Mr. Robert Kichak** is servicing as acting Chief
5. Guidance, Navigation and Control Center (Code 570) - **Mr. Frank Bauer** was named Chief
6. Information Systems Center (Code 580) - **Ms. Martha Szczur** was named Chief

### Reminder: ISO 9001 Sessions

Date	Time	Last Name
<b>Goddard</b>		
2/10/98	9-11 a.m.	Hf - Jo
2/13/98	9-11 a.m.	Jp - La
2/18/98	9-11 a.m.	Lb - Ma
2/19/98	9-11 a.m.	Mb - Mo
2/20/98	9-11 a.m.	Mp - Pa
2/23/98	9-11 a.m.	Pb - Ri
2/23/98	1-3 p.m.	Rj - Se
2/25/98	9-11 a.m.	Sf - St
3/2/98	9-11 a.m.	Su - Wa
3/2/98	1-3 p.m.	Wb - Z
<b>Wallops</b>		
3/10/98	9-11 a.m.	A - H
3/10/98	1-3 p.m.	I - R
3/11/98	9-11 a.m.	S - Z

## Dr. Aprille Ericsson-Jackson Selected As Recipient of Special Recognition Award

by Mablelene Burrell and Dennis Small

**Dr. Aprille Ericsson-Jackson** will receive a Special Recognition Award presented by the 1998 Black Engineer of the Year Awards Selection Committee. This award is given to candidates whose qualifications place them in the ranks of the nation's highest achievers. Hundreds of the nation's top scientists, engineers and technology leaders were nominated for this award. Goddard is very proud to have one of its own stand out as one of this nation's best.

Dr. Ericsson-Jackson will be recognized for her accomplishments as part of the 1998 Black Engineer of the Year Awards Conference. The conference, to be held on February 26 - 28, in Baltimore, Md., represents one of the most comprehensive career and professional development events for African American executives and professionals in math, science, technology and engineering.

Dr. Ericsson-Jackson will be honored at the Power Breakfast with Historically Black Colleges and Universities' Deans and Corporation Leaders. The award ceremony and breakfast will take place on Saturday, February 28.

The African American Awards committee also submitted Dr. Gregory Clarke in the category of Outstanding Technical Contribution in Government. Congratulations to both Dr. Gregory Clarke and Dr. Ericsson-Jackson on their achievements!



Dr. Aprille Ericsson-Jackson

## Goddard Retiree Receives QASAR "Best of the Best" Award

by Deanna Adams, Office of Public Affairs

**Mr. Robert Cummings**, a recent Goddard retiree, has been awarded the QASAR "Best of the Best" Award. QASAR, which stands for Quality Assurance Special Achievement Recognition, recognizes NASA employees as well as other Government and Contractor individuals for significant quality

improvements to products or services. Each individual NASA center has its own local QASAR awards program. The "Best of the Best" is chosen from among the awardees of the individual center QASAR awards, for Agencywide recognition.

Cummings, who gave 32 years of dedication to Goddard, was awarded the QASAR "Best of the



From L to R: Frederick D. Gregory, NASA HQ AA for Safety & Mission Assurance, Robert Cummings, Office of Flight Assurance (OFA), Charles Vanek, Director, Goddard's OFA

"Best" for his contributions to the improvement and maintenance of manufacturing of technical standards, which have increased the safety and reliability on NASA flight programs. Congratulations!

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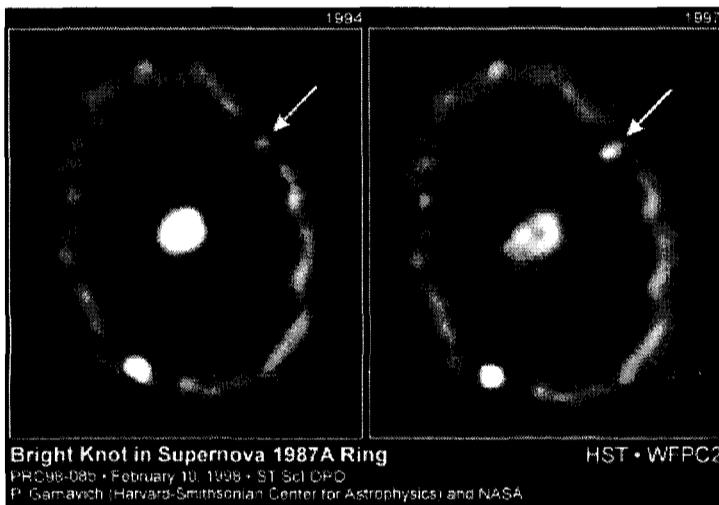
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## Hubble Photographs Supernova Stellar Shockwave

By Tammy Jones, Office of Public Affairs

Through the eyes of NASA's Hubble Space Telescope, astronomers have been given a glimpse of a never before seen titanic collision between an onrushing stellar shock wave and an eerie, glowing gas ring encircling a nearby stellar explosion, called Supernova (SN) 1987A. SN 1987A is located in the Large Magellanic Cloud, 167,000 light years from Earth. Although the star's self-destruction was first seen 11 years ago, scientists are just now beginning to witness the tidal wave of energy reaching the "shoreline" of the immense light-year wide ring.

Shocked by the 40-million mile per hour impact, a 100-billion mile diameter knot of gas in a piece of the ring has already begun to "light up," as its temperature surges from a few thousand degrees



Bright Knot in Supernova 1987A Ring  
PRC08-08b • February 10, 1998 • ST ScI OPO  
P. Garnavich (Harvard-Smithsonian Center for Astrophysics) and NASA

Left: A 1994 image of SN 1987A. Right: Recent Hubble image of SN 1987A. The arrow points to the brightening knot of gas that marks the site of the collision with the onrushing stellar shockwave

to a million degrees Fahrenheit. "We are beginning to see the signature of the collision: the hammer hitting the bell. This event will allow us to validate ideas we have built up over the past 10 years of observation," says Robert Kirshner of the Harvard-Smithsonian Center for Astrophysics (CfA) in Cambridge, MA. "By lighting up the ring, the supernova is exposing its own past."

Astronomers predict that in a few years the ring will become completely ablaze with light as it absorbs the full force of the crash. Illuminating the surrounding space like a flashlight in a smoky room, the glowing ring is expected to shed new light on many unanswered mysteries of the supernova: What was the progenitor star? Was it a single star or binary system? Are a pair of bizarre outer rings attached to an invisible envelope of gas connecting the entire system?

The ring around SN 1987A formed 20,000 years before the star exploded. One theory is that its formation resulted from stellar material flung off into space as the progenitor star devoured a stellar companion. The ring's presence was given away when it was heated by the intense burst of light from the 1987 explosion. The ring has been slowly fading since then as the gas cools.

Several years ago, radio waves and X-rays were detected as the fastest moving explosion debris slammed into cooler invisible gas inside the ring. In the spring of 1997 the newly installed Space Telescope Imaging Spectrograph (STIS) first measured the speed of the supernova debris pushing along the shock wave. "The STIS lets you see the invisible stuff," says **George Sonneborn** of Goddard. "We see the shock happening everywhere around the ring." For the full text of this press release go to the Goddard Homepage at <http://www.gsfc.nasa.gov> and choose **FLASH**

## Space Technology Used to Detect and Treat Heart Disease

Heart disease is the leading cause of death among men and women in the United States. Nearly 60 million Americans have high blood pressure. If left untreated, it can lead to heart attacks, stroke and other medical problems. Until very recently, cardiovascular disease has not been recognized as a major risk for women, but this is changing. Since 1984, more women than men have died of heart disease.

In recognition of American Heart Month, NASA has recently announced how its research and technology have helped revolutionize the practice of medicine, including the understanding, diagnosis and treatment of heart disease. "I am proud that NASA research is helping doctors treat heart disease, one of the biggest threats to the health of all Americans," said NASA Administrator Daniel S. Goldin. "This is a fascinating time for medical science, when the developments of our aeronautics and space programs can be applied to a disease that affects so many here on Earth."

NASA technologies resulting in the development and or perfection of various medical procedures and devices which aid in the treatment of heart disease can be found in today's doctor's offices and hospitals. For example, take a look at the pacemaker. This device allows individuals with irregular heart beats to lead healthy, active lives by sensing irregular heartbeats and delivering an electrical stimulus to get the heart back on track. NASA's two way communication technology, first used to communicate with satellites, allows doctors to fine-tune the pacemaker outside the body to better regulate the heart rate to keep "pace" with patients' active lifestyles.

In addition, NASA research has resulted in the invention of the "cool" laser. This type of laser uses pulses of ultraviolet light, instead of thermal heat, to target and break up artery blockages without damaging arterial walls.

Also, NASA electrode technology, developed to monitor the heart rate of astronauts, has led to exercise equipment that continually monitor's the user's heart rate. This type of exercise equipment is in use in gyms today and in rehabilitation centers.

NASA is continuing in its efforts to detect and treat heart disease. The Agency is working with the National Institute of Health, the National Cancer Institute and the U.S. Department of Health and Human Services' Office of Women's Health. The technology of tomorrow will include a new cardiac imaging procedure that exposes patients to much lower doses of radiation than current procedures and a permanently implanted heart pump that helps a patient's own heart's pumping ability to maintain adequate blood flow.

## CURRENT news

- The Student Nitrate Oxide Explorer (SNOE) has been targeted to launch on to February 21 at 2:04 a.m. EST.

- Launch of the Transition Region and Coronal Explorer (TRACE) has been rescheduled for March 14. Launch is set for 9:18 p.m. EST.

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## Directorate Changes Due to Center Reorg

The NASA Communications Division (formerly Code 540) was reestablished within the Management Operations Directorate as Code 240. **Mr. Jack Hodge** is Acting Division Chief and **Mr. Thomas Butler** is Associate Chief. The former Nascom Engineering Branch (Code 541) and Customer Engineering Branch (Code 542) were realigned in their entirety to Code 240.

The Networks and Mission Services Project (Code 450) was established in the Flight Project Directorate. **Mr. Philip Leibracht** was appointed as the Associate Director of this project. **Mr. Richard Tagler** was appointed Deputy Associate Director.

The Suborbital Projects and Operations Directorate (Code 800) has been restructured to reflect the Wallops 2000 initiative with **Mr. Craig Purdy** appointed as Deputy Director. Following are the offices within Code 800:

The Resources Management Office, Code 801 -  
**Ms. Jean Johnson** continues as Office Chief.

The Policy and Business Relations Office,  
Code 802 - **Mr. H. Ray Stanley** continues as Office Chief

The Safety Office, Code 803 - **Mr. Philip Ward** assigned as Office Chief

The Sounding Rockets Program Office - Code 810  
- **Mr. Bobby Flowers** appointed as Office Chief

The Balloon Program Office, Code 820 -  
**Mr. Harvey Needleman** appointed Office Chief

The Aircraft Office, Code 830 - **Mr. Joseph Duke** assigned as Acting Office Chief

The Range and Mission Management Office,  
Code 840 - **Mr. Joseph Duke** appointed Acting Office Chief

The University Class Projects Office, Code 850 -  
**Mr. F. Steve Nelson** appointed Office Chief

The Spartan Office, Code 860 -  
**Mr. Donald Carson** assigned as Office Chief

The Shuttle Small Payloads Projects Office,  
Code 870 - **Mr. S. Chris Dunker** was appointed as Office Chief

Ms. Carol Bleile of Code 210 passed away on Saturday February 7, 1998 of renal cell carcinoma (kidney cancer). She had been diagnosed in December. A memorial service was held on Friday, February 13 at Grace Lutheran Church in Bowie. Anyone wishing to may send a memorial donation to the National Kidney Cancer Association, Suite 203, 1234 Sherman Avenue, Evanston, IL 60202-1375.

## Ribbon Cutting at Visitor Center Unveils New Earth Science Exhibit

by Deanna Adams, Office of Public Affairs

"Build it and they will understand." Those were words spoken by **Dr. Robert Price**, Director of Goddard's Earth Science Systems Program Office as he addressed guests at the ribbon cutting ceremony held on February 10 at Goddard's Visitor Center. The ceremony celebrated the opening of the new Earth Science Gallery.

Goddard has developed this gallery to promote the education of the public about our planet and its climate. In focusing on Earth science, we are able to learn how we affect our environment and how the environment affects us. The gallery, which includes a variety of interactive displays, video and audio clips, integrated web sites with Earth science data, and an impressive hologlobe that gives visitors a different view our home, conveys the message that while we already understand so many facets of our environment, there are many questions still to be answered. Through cooperative efforts with other agencies and international partners, we will discover the answers to those questions.

Center Director, **Mr. Al Diaz**, began the ceremony with a welcome speech on why studying the Earth's environment is so important, and introduced several dignitaries and guest speakers, each holding an avid interest in the



**Ribbon Cutters Snip Away. From L. To R: Dave Jones, NBC-4; Ron McPherson, NOAA; William Townsend, NASA HQ; Robert Price, Al Diaz, Cindy Howell, Goddard; Mitch Hobish, Consultant; Mark Pine, JPL; Doug Norton, NASA HQ; and Sherry Foster, Goddard**

pursuit of Earth science data and knowledge.

**Dr. Robert Price** stressed the need to educate the public about our planet and expressed his delight in the fact that the Earth Science Gallery culminates those plans to do so. Mr. William Townsend, Deputy Associate Administrator for Earth Science Programs at NASA Headquarters followed Dr. Price's remarks, giving a speech about how studying the Earth from space gives us the knowledge to understand the changes that occur in our planet.

Dr. Ronald McPherson, Director of the National Centers for Environmental Prediction of NOAA spoke next. He discussed the partnership between NOAA and NASA, saying that this partnership brings to the public, a world-class Earth systems science. Last to give remarks was another individual superbly interested in the study of Earth, Mr. Dave Jones, meteorologist from Washington DC station NBC-4, WRC-TV. He explained that the average person gains the most exposure to Earth science data when they watch the weather forecast on the news, and discussed measures through which television is continuing, by working with NASA, to educate the public in these areas.

After the ribbons were cut, the guests were able to tour the gallery.

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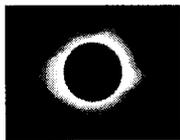
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## Total Solar Eclipse: February 26

by Bill Steigerwald, Office of Public Affairs

On Thursday, February 26, a total eclipse of the Sun will occur. The eclipse will be visible from a path that stretches 93 miles through South America and the Caribbean. A partial eclipse will be seen from areas of the United States, eastern Canada, Mexico, Central America and the northern half of South America. The eclipse will begin at 12:23 p.m. EST, reach maximum at 1:15 p.m. and end at 2:06 p.m.

The Center has many activities planned for this event. The ISTEP/POLAR spacecraft will be imaging the shadow as it passes over the Earth. The 'expected position' diagrams will be replaced by the live images as they become available. All of the images will be available on one web site so that people can compare the location from image to image.

The GOES satellite system will be offering a "GOES Eye View" of the eclipse. NASA hopes to provide realtime full-disk images every half-hour during the day of the eclipse from the GOES-10 satellite. In preparation for the midday equatorial solar eclipse, a special high-resolution GOES-8 sector, watching the island of Aruba on the northern coast of South America, has been set up. In addition, there will be other routine GOES-8 sectors watching the path of the total eclipse, such as the Galapagos Islands, and Montserrat and Guadeloupe islands in the Antilles.

The joint NASA/ESA Solar and Heliospheric Observatory (SOHO) spacecraft also will be observing the Sun during the eclipse. Because SOHO is positioned far above the Earth's atmosphere, it can observe the Sun directly without the interference from the atmosphere.

Goddard's Education Program Office has created some educational activities to further your experience, including How to Make a Pinhole Viewer. Also, the San Francisco Exploratorium, and Discovery Online are presenting an educational interactive webcast called "Solar Eclipse: Stories from the Path of Totality." The Exploratorium will be providing direct TV imagery of the solar eclipse from the island of Aruba as well as live reports from their facility in San Francisco using audio/video web cast technology for anyone connected to the World Wide Web. There will be a one-hour broadcast at 7:00 PST Feb. 25, the night before the eclipse, and two hours of events starting at 9:00 PST on Feb. 26. Learn directly from Sun-Earth science experts as the eclipse happens.

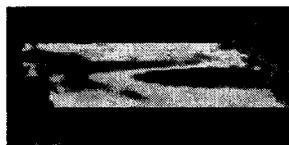
For full details on all of the above, visit the Center's Eclipse Homepage at <http://pao.gsfc.nasa.gov/gsf/eclipse/eclipse.htm> In addition, this site offers an ASK THE SCIENTIST feature so you can pose a question via e-mail and get an answer quickly.

## Follow El Niño

For the latest on what's going on with the current El Niño, visit the following URL:

<http://nsipp.gsfc.nasa.gov/enso>. Watch an upcoming issue for a complete story on

the most recent develops of the El Niño.



## Goddard Developed Instrument Set to Investigate Atmosphere of Saturnian Moon

By Lynn Chandler, Office of Public Affairs

In the year 2004, a probe carrying six measuring instruments will parachute from onboard the Cassini spacecraft which will be orbiting Saturn, into the atmosphere of Titan, Saturn's largest moon.

If everything proceeds according to plan, Goddard scientist, **Dr. Vivek Navale**, along with his Code 918 colleagues, will obtain measurements of atmospheric composition from an instrument that they developed and tested prior to the 1997 launch of Cassini. The instrument, the gas chromatograph/mass spectrometer (GC/MS) was specifically designed to survive the method of probe entry into and the conditions within Titan's atmosphere. The surface pressure on Titan is 1.5 times that on Earth and the temperature is 95 degrees Kelvin. The Huygens probe, carrying the GC/MS and five other instruments, will descend for three hours through Titan's atmosphere. All of the Huygens Probe's instruments are designed to provide complementary information about the variation of atmospheric characteristics with altitude. Remote measurements have provided a basis for researchers to feel that the chemical processes currently active in Titan's atmosphere resemble those that were active in Earth's early atmosphere. If so, GC/MS measurements of nitriles and low molecular weight hydrocarbons will contribute to investigations of the origin and evolution of organic compounds that lead to the formation of living organisms.

For more information on Cassini, visit the Cassini homepage at <http://www.jpl.nasa.gov/cassini/>

## CURRENT news

- Dr. Wesley T. Huntress, Jr., NASA's Associate Administrator for Space Science, has announced his departure from the Agency in the near future. Many of NASA's achievements in space science, including the Hubble Telescope, are due to the efforts of Dr. Huntress.
- At approximately 5:10 p.m. EST on Feb. 17, 1998, Voyager 1 cruised beyond the Pioneer 10 spacecraft, becoming the most distant human-created object in space, at 6.5 billion miles (10.4 billion kilometers) from Earth.
- NASA has selected 335 research proposals for negotiation of Phase I contract awards for NASA's Small Business Innovation Research (SBIR) Program. The goals of the SBIR are to stimulate technological innovation, increase the use of small businesses (including women-owned and disadvantaged firms) in meeting federal research and development needs, and increase private sector commercialization of results of federally funded research.
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## Goddard Scientist Receives Rank of AAAS Fellow

By Nancy Neal, Office of Public Affairs



Dr. Carol Crannell, Code 682

**Dr. Carol Jo Crannell**, an astrophysicist in the Space Science Directorate at the Goddard Space Flight Center, has received the rank of Fellow of the American Association for the Advancement of Science (AAAS). Crannell is honored for her contributions to high energy physics, especially the design of optics and detectors for solar gamma rays. The AAAS presented Dr. Crannell with a certificate and rosette in Philadelphia, on Feb. 14 during an AAAS forum.

"I was very flattered and delighted to receive the letter from the American Association for the Advancement of Science. It is an honor to be acknowledged alongside some really outstanding scientists," said Crannell. Each year the American Association for the Advancement of Science Council elects members based on their advancement of science. The distinction of being elected an AAAS Fellow began in 1874. All recipients of this honor receive a certificate and a rosette.

Crannell was elected to be a Fellow of the American Physical Society in 1992. She received the Outstanding Achievement Award from Women in Aerospace in 1990, and is the recipient of numerous other prestigious awards. Crannell is the author or co-author of 92 publications, of which 53 are in referred journals.

## Goddard Web Site Recently Nominated for Webby Award

By Deanna Adams, Office of Public Affairs

A Goddard web site was recently nominated for a Webby Award. These awards give recognition to web sites that are considered to be the most creative, innovative and valuable in their class, while honoring the teams behind their creation and design.

The Goddard site chosen was one of five web sites nominated in the education category. The page, titled StarChild, provides students at different grade levels with information on topics such



<http://starchild.gsfc.nasa.gov/>

as the solar system, the universe and space travel. The StarChild web page was developed out of the High Energy Astrophysics Science Archive Research Center (HEASARC), part of the Laboratory for High Energy Astrophysics by **Dr. Nicholas White**.

The awards ceremony will be held on March 6 in San Francisco Palace of Fine Arts. A panel of judges will choose a winner from 5 nominees in each of the 19 categories. All judges are recognized experts in their respective fields.

## Community Outreach At the Glenn Dale Elementary Science Fair

by Lynn Sanders, Code 750

As part of a community outreach effort, several Goddard employees recently took the time to volunteer as judges for nearby Glenn Dale Elementary School's science fair which was held on February 10.

Because schools sometimes have difficulty in recruiting people to judge science fair projects, Glenn Dale Elementary's administration expressed its appreciation of Goddard's support in this endeavor. In return, the Goddard judges described their enjoyment in having the opportunity to see first hand the different types of intriguing experiments and exhibits the children came up with. "Once you judge a science fair you will be glad that you did. It is extremely fulfilling to talk to students about their projects," said **Evette Conwell**.

All of the judges left the school a little more knowledgeable than when they arrived, having learned about physics, biology, chemistry, engineering and consumerism. Hats off to **Carl Taylor**, Code 541; **Jeanne Behnke**, Code 586; **Sue Bekira**, Code 586; **Anel Flores**, Code 750; **Evette Conwell**, Code 750; **Ted Mecum**, Code 750; **Darryl Mitchell**, Code 750; **Lena Iredell**, Code 910; and **Carey Noll**, Code 922 for stepping up and supporting this community outreach activity on behalf of Goddard.

Look for some of the projects which will be on display in building 32 during the first week in March.

## Call for 1998 Software of the Year Award Submissions

NASA has opened nominations for its 1998 Software of the Year Award, which recognizes software developed and owned by NASA. The award is sponsored by the Chief Information Officer, Lee Holcomb; the Chief Engineer, Daniel Mulville; and NASA's Inventions and Contributions Board (ICB). Last year, the competition resulted in nearly \$200,000 awarded. Full details on submitting applications can be found on the Goddard Internal homepage at <http://www.internal.gsfc.nasa.gov>

Entries and supporting material must be submitted by April 17. Information about the winner and the finalists from 1997 is available at the Web site:

<http://www.hq.nasa.gov/office/codei/swy97win.html>

## GSFC All-Hands Meeting:

Goddard's new Center Director, **Mr. Al Diaz**, will host an all-hands meeting on Thursday, February 26, at 9:00 a.m. in the Bldg. 8 auditorium. Mr. Diaz will discuss where the Center is going, Goddard's vision for the year 2000 and beyond, and lessons from the recent organizational survey and actions. A sign language interpreter will be present.

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National Aeronautics and  
Space Administration  
Goddard Space Flight Center

# GODDARD news

Greenbelt, Maryland/Wallops Island, Virginia

February 1998

The Goddard News is published weekly by the Office of Public Affairs, Goddard Space Flight Center, Greenbelt, MD 20771

## SPECIAL EDITION – RECAP OF 1997: THE YEAR IN REVIEW

### Review of a Very Productive Year

By Joseph Rothenberg



#### *Missions and Launches*

1997 was a busy year for Goddard. A new GOES weather satellite was launched, as were the Advanced Composition Explorer and Tropical Rainfall Measuring Mission spacecraft. Goddard instruments were aboard the SeaStar and Cassini spacecraft which also successfully launched in 1997. In addition, Goddard participated in three Pegasus launches and a number of space shuttles that carried the Spartan, Hitchhikers and Get Away Special carriers and payloads. Also, we launched balloons and sounding rockets from locations around the world.

#### *Science Results and Discoveries*

1997 was the year for making some of the most intriguing scientific discoveries ever. SOHO uncovered mysteries of the Sun. HST detected new born stars in a neighborhood of senior citizen stars, showed us colliding galaxies and the weather on Mars. We saw galaxies clustered in small groups, held together by as much as 10 times as much dark matter as normal matter, and learned more about the physics of black holes. Our scientists collected new data on ocean color, played a major role in the study of El Niño, detected magnetic fields around Mars, observed Comet Hale Bopp and measured ozone holes.

#### *Center Achievements*

We opened the Integrated Mission Design Center to support mission development for internal and external principal investigators. We put in place a Rapid Spacecraft Acquisition Capability to provide NASA with a faster, better, cheaper method for the purchase of satellite systems. We achieved a significant milestone by successfully demonstrating EOSDIS to the science community. We successfully integrated Headquarters' and Goddard's procurement, grants and logistic functions. The new Center Reorganization better positions Goddard to implement new ways of doing business.

#### *Technology*

In 1997, Goddard continued to be a technology leader in the world. We developed a new gamma ray detector array capable of locating gamma ray bursts with unprecedented clarity. We helped infuse new technology in medical equipment used in

the early detection of breast cancer. We designed a new Internet tool - the electronic handbook - that can eliminate the paperwork required to document and manage complex, widely distributed processes.

#### *Employee Achievements*

Our people and their efforts continue to be recognized in national and international circles. Among the achievements were the induction of Goddard employees into Aviation Week and Space Technology's Laureate Hall of Fame, and the nomination of the Space Telescope Imaging Spectrograph by *Discover* magazine for a technological innovation award. Two Goddard scientists were elected members of the prestigious National Academy of Sciences, and another was presented the William T. Pecora Award for achievements in the field of remote sensing.

#### *Teamwork*

Goddard initiated a tele-mentoring program with the Stevens Institute in New Jersey and also developed a control center at Bowie State. We've partnered with NOAA to bring their people here to work with our scientists and our property folks have been busy providing millions of dollars in excess material to schools throughout the region. We signed a special MOU with the National Park Service and we now have 14 partnerships between our scientists and major universities.

#### *A Busy Year Ahead*

1998 promises to be another busy and challenging year. Goddard has already played a significant role in the first mission of 1998, providing an instrument and trajectory support for the Lunar Prospector mission launched January 6. Later this year, other Goddard-managed spacecraft are scheduled to begin their missions, including TRACE, NOAA-K, EOS AM-1, Landsat-7, WIRE and FUSE. In addition, we will continue to support the Shuttle program with flights of Spartan, Hitchhikers and Get Away Specials.

1998 will be a year full of challenge and change. As the Center makes the transition to new leadership, I'm confident Goddard will set new standards for quality, innovation and excellence and will vigorously carry out its vision to revolutionize knowledge of the Earth and the universe through scientific discovery from space to enhance life on Earth.

## The HST Second Servicing Mission - A Great Start to 1997

*By Tammy Jones, Office of Public Affairs*

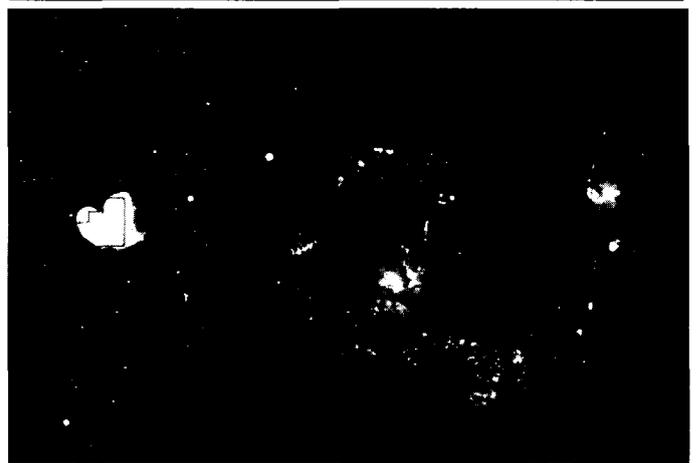
February of 1997 brought along a tremendous highlight to the space program, the very successful Second Servicing Mission for NASA's Hubble Space Telescope.

During the servicing mission, astronauts completed five spacewalks where they replaced worn out parts, installed upgraded hardware and two new science instruments: the Space Telescope Imaging Spectrograph (STIS) and the Near Infrared Camera and Multi-Object Spectrometer (NICMOS).

Prior to installing the new science instruments, astronomers predicted that Hubble would beam back extraordinary images, but the telescope has done more than that. The 25-thousand pound (12 ton) spacecraft has exceeded expectations by providing the science community with many clues towards solving the



Second Servicing Mission Astronauts Diligently Working on the Hubble Space Telescope Docked in the Shuttle's Cargo Bay



Pictured Above are Just Two of Dozens of Images Obtained by the HST During 1997

greatest mysteries of the universe.

Since the installation of the STIS and NICMOS instruments, nearly 40 Hubble images have been released to the public. STIS is providing unique and powerful spectroscopic capabilities for the telescope. Using STIS, Hubble discovered a supermassive black hole in the center galaxy, M84. NICMOS is providing near infrared capabilities. It gives us a dramatic new look at the Orion Nebula which contains the nearest nursery for massive stars. Hubble has shown us colliding galaxies and predicted Martian weather. It has given us a glimpse of what may be the largest star in our galaxy. And now, astronomers are using Hubble to get a preview of our own Sun's fate, billions of years from now. Be prepared for a new array of fantastic discoveries to be unveiled during the new year!

# Our People: A Tribute to the Center's Excellence

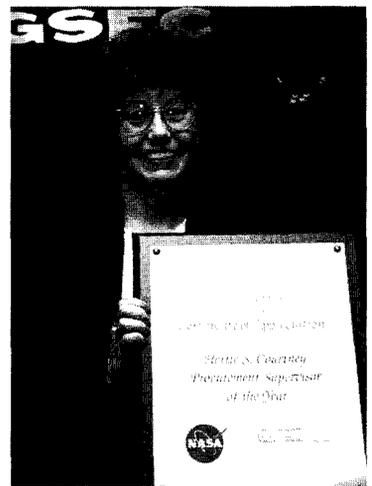
A 1997 Scrapbook of Some of Goddard's Finest



**Joe Rothenberg & Frank Ceppolina,  
Code 442 - James J. Kerly Award**



**Aprille Ericsson-Jackson, Code 712  
WISE Award for Engineering  
Achievement**



**Hettie Courtney, Code 200  
Procurement Supervisor of  
the Year Award**



**Desiree Taminelli, Code 201  
BFED Annual Excellence Gold  
Award**



**John Mather, Code 685  
Elected to National Academy  
of Sciences**



**Carline Cazeau, Code 519  
National Technical Association Award**



**Jack Bufton, Code 920 - Moe I. Schneebaum Award  
and Joe Rothenberg**



**Sherry Foster, Code 200  
Presidential Rank Award**

# 1997 Was A Year Packed



Joe Rothenberg tries out his pitching arm at Goddard Night with the Baysox



Congressman Cummings Visits Goddard



Exceptional Leaders Get to Wear Special Hats



PQA (President's Quality Award) Team Members Pose Together for a Group Shot



Senator Mikulski and Dan Goldin Visit WFF to Discuss Wallops 2000 Plan



Ken Dearth, Art Fuchs and Walt Moleski Proudly Show Off the Code 500 Championship Softball Plaque. Code 530 Were the Winners!

# With Many Exciting Events



**Education Showcase Activities**



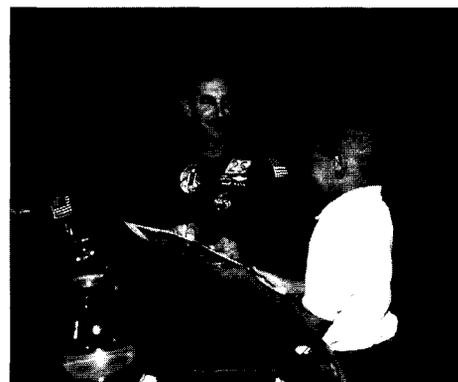
**Magic Tricks at Focus on Our Future Day**



**Fun at Celebrate Goddard Day II**



**Environmentally Conscious Citizen Questions Captain Planet at Goddard's Earth Day**



**Crew from STS-85 Visits the Center**



**The Winners: Goddard Once Again Beats Headquarters in the Annual Softball Tournament**

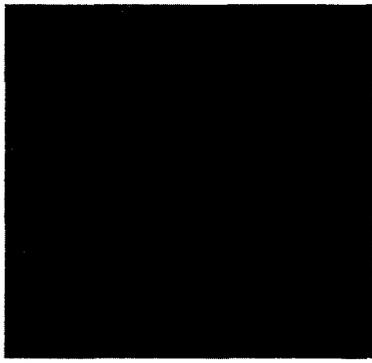


**Al Diaz, New Center Director, Accepts Key to Goddard from Joe Rothenberg**

# 1997 Mission Highlights and Science Results

1997 was a big year for Goddard in terms of missions. The Center was alive and busy launching satellites in both the space and Earth science areas. Below are just a few of the many projects that marked the year as one of Goddard's best.

GOES-10, the third satellite of the Geostationary Operational Environmental Satellite (GOES) System, launched in April 1997. The GOES satellites are a



**GOES-8 Image of Earth**

joint effort between NASA and the National Oceanic and Atmospheric Administration (NOAA). They provide precise and accurate weather observation and atmospheric measurement data for the United States.

The Seastar/SeaWiFS instrument launched in June 1997. Seastar measures levels of microscopic marine plants in oceans by collecting ocean color data with the SeaViewing Wide Field-of-View Sensor



**SeaWiFS Image of the Global Biosphere**

(SeaWiFS) instrument. This data helps scientists in understanding the role of the oceans in the global carbon cycle.



**Spartan 201**

Spartan 201 launched in November 1997 aboard the STS-87 mission. Spartan 201 is an orbiting spacecraft that is deployed by the Space Shuttle and retrieved on the same mission. Its function is to investigate solar complexities of the universe. During the STS-87 mission, unforeseen circumstances curtailed the Spartan 201 mission and another is planned for October 1998.



**ACE blasts off on a Delta II Rocket**

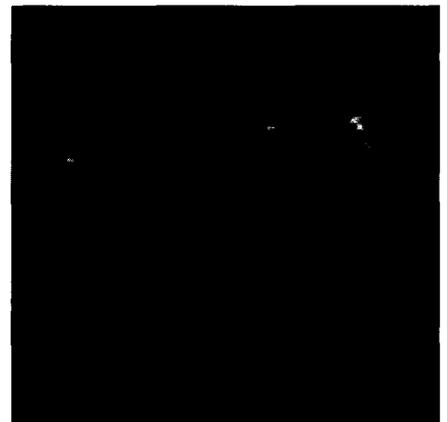
The Advanced Composition Explorer (ACE) launched in August 1997 aboard a Delta II launch vehicle. The primary purpose of ACE is to determine and compare the isotopic and elemental composition of several distinct samples of matter, including the solar corona, the interplanetary medium, the local interstellar medium and galactic matter. This will help scientists understand the origin of all matter in the universe.

The Tropical Rainfall Measuring Mission (TRMM), a joint project between NASA and the Japanese Space Agency (NASDA), launched on the 1997 Thanksgiving holiday. TRMM is the first spacecraft designated to observe tropical and subtropical rainfall. By understanding rainfall and its variability, scientists come closer to understanding and predicting global change.

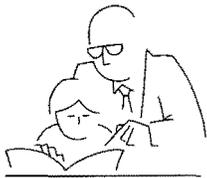


**The TRMM Spacecraft**

In 1997 Goddard scientists received a wealth of science images and results from existing spacecraft. Some particularly intriguing images were taken with the Solar and Heliospheric Observatory (SOHO) which spent the year providing scientists with pictures of new perspectives of the Sun.



**SOHO View of the Sun's Corona**



## Education Highlights

In Support of Goal 3 of the Center's Plan for Implementing NASA's strategies, "To Enhance the Nation's Technological and Scientific Literacy,"

Goddard's Education Office spent a busy year conducting workshops and forming partnerships with education institutions. Some of the highlights of 1997 included:

[REDACTED]

Goddard hosted its first Education Showcase on October 16. This showcase was designed to give Goddard employees first-hand information on what their colleagues have been doing in terms of using Earth and space science information and data to enhance scientific and technological literacy.

The showcase featured a variety of exhibits, seminars and workshops in the areas of Earth science, space science and technology. Some of the exhibits included the Goddard Educator Resource Center, Earth Science Enterprise Education and Outreach, the NASA Space Experiment Module, Lunar Sample Certification, Impacting the Science Curriculum and more.

[REDACTED]

**Major Collaborative for Teacher Preparation** - Goddard has developed internships for this partnership which impacts preservice teacher training among all higher education institutions in Maryland.

**The Connecticut Network for Education** - This network was created by Goddard and has served to unify all major formal and informal education groups within the state. The group is led by the Connecticut State Department of Education Science Supervisor.

**The Stevens Institute of Technology** - Goddard is in the process of working a distance mentoring program with the Stevens Institute.

**Prince George's Community College** - Goddard has created an IPA partnership with Prince George's Community College.

**National Security Agency** - Goddard is teaming with NSA to improve mathematics and science proficiency among students in the DC and Baltimore school areas.

[REDACTED]

The NASA Aerospace Education Services Program (AESP) is a nationwide program designed to enhance educator awareness and understanding of scientific research and development. Last year, under the AESP program, Goddard offered 417 special programs and teacher workshops in addition to nearly 41,000 school visits.

## Want More Info?

For more information on what's going on at NASA, visit the following URL's:

Hubble Images and Press Releases:  
<http://oposite.stsci.edu/pubinfo/>

Mars Global Surveyor Homepage:  
<http://mgswwww.arc.nasa.gov/index.html>

Lunar Prospector Homepage:  
<http://lunar.arc.nasa.gov/>

Shuttle Info. and Countdown:  
<http://www.shuttle.nasa.gov/>

Tropical Rainfall Measuring Mission:  
<http://trmm.gsfc.nasa.gov/>

Goddard Internal Homepage:  
<http://www.internal.gsfc.nasa.gov/>

Goddard News Releases:  
<http://pao.gsfc.nasa.gov/gsf/newsroom/flash/flash.htm>

Goddard Educational Programs:  
<http://pao.gsfc.nasa.gov/gsf/educ/educ.htm>

Today @NASA Homepage:  
<http://www.nasa.gov/today/>

Space Station Homepage:  
<http://www.station.nasa.gov/>

El Niño Homepage:  
<http://nsipp.gsfc.nasa.gov/enso/>

National Space Science Data Center:  
<http://nssdc.gsfc.nasa.gov/>

SOHO Homepage:  
<http://sohowww.nascom.nasa.gov/>

SeaWiFS Homepage:  
<http://seawifs.gsfc.nasa.gov/SEAWIFS.html>

# NASA Administrator Summarizes 1997

During 1997, NASA again captured the American public's imagination. Some examples of this rekindled excitement can be embodied by the past year's events: more than half a billion hits on the NASA website during the Mars Pathfinder mission; the exposure of the Hubble Space Telescope's mindbending photographs on the front pages of our nation's newspapers; the development of new breast cancer detection techniques; the design of technologies that will dramatically reduce airplane crash rates; an increase in the public's understanding of a complicated weather phenomenon called El Niño; and even the unprecedented, collective national concern for astronaut Michael Foale and his replacement aboard the Mir space station, David Wolf. The list goes on and on.

NASA's successes did not happen because we have good luck. Nor did they happen because of any one person. Each happened because high goals were set and talented men and women, like you, worked together to meet the challenges.

Whether it is in the realm of space, aeronautics, or relating our discoveries for educators, business, or the media, NASA is helping to ensure America remains strong. We are inspiring children to learn about math and science. We are forging the industries of tomorrow. None of this would happen were it not for the brilliant minds of NASA's employees and their commitment to scientific discovery.

At NASA, we plan for the future every day, knowing that the path is filled with risks. However, our reward is, literally and figuratively, out of this world. During the coming year, we will face new challenges. But I know I can count on you to dream, to inspire, and to envision solutions to NASA's next great achievement.

What a time to be alive. What a privilege to be at NASA and to see the next century unfold.

Take a moment to reflect the past year. We had a recordbreaking year, performed at unbelievable levels, and took on tasks that critics said could not be accomplished. I want to be the first to say thank you. Let us resolve together to make 1998 even more rewarding.

Daniel Goldin  
NASA Administrator

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Contact:  
Gwen Duran, Code 239  
Darlene Aho, Code 130

## 1997 Retiree Listing

(Deaths - underlined>

NAME	CODE	NAME	CODE
Betty Brocki	113	Delores Curtis	530
Paula Decima	113	Denver Herr	530.4
Michael Backert	151	Frank McCluer	531.2
Bennie Powers	151.2	Eugene Young	532
Joseph Bliss	151.3	Vaughn Turner	540
Eldon Hawley	151.3	Ormond McDaniel	541
Ronald Muller	170	William Hahn	541
John Firmin	200	Edward Lawless	542
Bonnie Umbaugh	210H	Charles Woodyard	550
Arlene Preston	210	Leland Cisney	551
Nancy Kemper	212	Douglas Rose	551
Susan Stallings	212	Thomas Lojacono	551
Wendy Hein	213	James Cooley	552
Joy Long	214.1	John Behuncik	552
Doris Watkins	214.3	George Mistretta	552
Gloria Blanchard	216	Clarence Doll	552
Billie Blackwell	218	Rosemarna Pajerski	581
Asa Mears	218	Kenneth Frost	600
Rosalice Peterson	218	Paul Paahby	630.1
Darlene Floyd	218	Carl Fichtel	660
Paul Mills	222	Franklin Shaffer	663
Bernard Meyer	227.2	Francis Birsa	663
Theodore Murphy	227.2	Claudia Brevard	664
Nicholas Phipps	227.3	Andrew Michalitsianos	680
Brenda Linton	228	Vernon Krueger	680.1
Brenda Toyer	235	Thurston Carleton	694
Helena Hungerford	253	Allan Sherman	700
Betty Graham	253	Robert Peavler	704
Patricia Neff	253	Everett Pyle	710
Jane Marshall	253	Joseph Fedor	712
Robert Bauman	300	John Celmer	712
William Bangs	301	Max Gassner	713
James Milligan	301	James Heaney	717
Daniel Garcia	303	Bernard Johnson	718
Thomas Heslin	313	Paul Murdock	718
Jane Jellison	313	James Phenix	720
Hual-Pu Chu	313	Ralph Mollerick	722
Vernon Weyers	400	Ronald O'Leary	722
Mary Adkins	400	Allen Tyler	723
Robert Flick	401	Anthony Campitelli	724
James Murphy	404	Donald Krueger	730
Jerre Hartman	404	Fred Kallmeyer	733
Linda Middleton	405	Edwin Moses	733
Kenneth Sizemore	405	Morton Friedman	737
Raymond Topolski	407	David Nace	737
George Daehemans	410	Howard Estep	737
Mildred Saari	421	Robert Weaver	740
Richard Weber	421	Theodore Goldsmith	740.3
Martin Donohoe	422	Clarke Prouty	740.3
John Hard	422	James Munford	750
Rosalice Price	442	George Stitt	754.4
Donald Miller	470	Holland Bell	800
John Knoll	480	Nathan Novack	820
John Underwood	480	Ray Pless	820
John Lyon	500	Frederic Sawyer	821
Donald Hel	501	Hartwell Taylor	822
Henry Stonesifer	501	Warren Griffin	823
William Macoughtry	501	William Parker	823
Thomas Ryan	501	Jack Gum	823
Sharon Arneson	503	Luther Gurkin	830
Roberta Valonis	503	Walter Nelson	831
Arthur Jackson	504	W. Brence	832
William Gulon	504	Donald Grant	833
Melvin Banks	505	Ben Robbins	833
Dale Harris	505	Louis Walter	900
Thomas Barlett	511	Joseph Johnston	912
John Koslosky	511	Hong Chiu	915
Calvin Segree	513	Robert Langei	921
Joseph Eck	514	Ann Mecherikunnel	926
John Schmidt	514	Robert Field	940
Steven Stampf	530	Helen Shirk	972



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# GODDARD news

Greenbelt, Maryland/Wallops Island, Virginia

Feb. 1998 Vol. 2 No.8

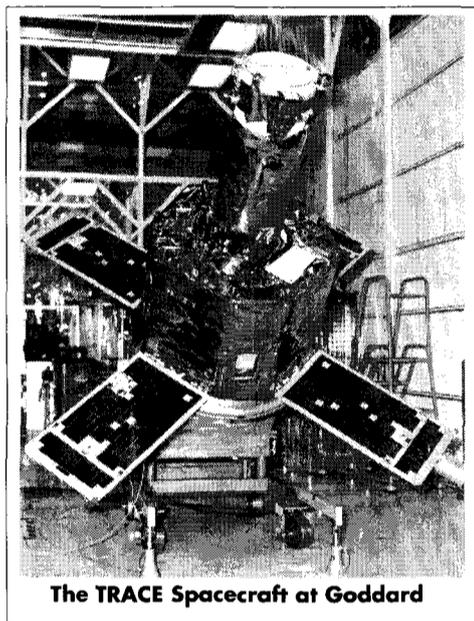
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## TRACE Spacecraft Set to Launch

by Deanna Adams, Office of Public Affairs

On March 19 Goddard will launch the Transition Region and Coronal Explorer (TRACE) Mission. Launch is set for 9:38 p.m. EST from Vandenberg Air Force Base, Calif., aboard a Pegasus XL rocket.

As humans become increasingly more dependent on satellites, for communication, navigation, weather forecasting, and security, we become more vulnerable to changes that occur in the Sun's atmosphere. TRACE will examine the physical conditions and dynamic structure of the upper regions of the Sun's atmosphere with 10 times better temporal resolution and 25 times better spatial resolution than the ongoing SOHO



The TRACE Spacecraft at Goddard

mission. These two missions will collaborate to produce detailed images of the lower photosphere through the corona of the Sun. The knowledge gained through this mission will increase our understanding of how radiation and particles from the Sun as well as its magnetic field can impact our own planet.

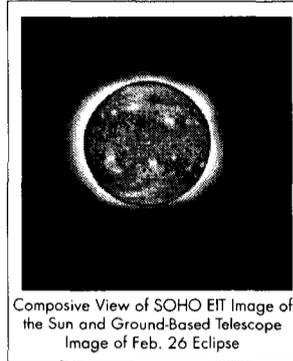
The TRACE consists of an extreme ultraviolet telescope that will examine light from the Sun in different bandwidths. The spacecraft will travel in a Sun-synchronous orbit around the Earth, allowing for nearly continuous observations of the Sun. The spacecraft stands approximately six feet tall, is nearly three and a half feet wide, and weighs 465 pounds.

The TRACE is the fourth satellite developed under Goddard's Small Explorer (SMEX) Program. The purpose of this program is to provide frequent, inexpensive flight opportunities for scientific investigations from space.

For additional information about the TRACE mission, visit the TRACE Homepage at <http://sunland.gsfc.nasa.gov/smex/>

## SOHO EIT and Earth View Composite

By Jim Sahli, Office of Public Affairs



Composite View of SOHO EIT Image of the Sun and Ground-Based Telescope Image of Feb. 26 Eclipse

Pictured to the left is a composite view photo of two individual images. The central image is a view of the solar surface and lower atmosphere made using the Extreme Ultraviolet Imaging Telescope (EIT) instrument on board the joint NASA/ESA Solar and Heliospheric Observatory (SOHO) spacecraft. The surrounding image is a view of the Sun's corona taken during the

recent solar eclipse using a telescope on the island of Aruba. The corona is seen as a shimmering white veil around the moon during a total solar eclipse. It consists of electrically charged gas that has been heated to one million degrees Fahrenheit. The intensely heated gas streams from the solar surface at 250 miles per second.

By combining the two types of images, which are pictured individually to the right, scientists hope to learn how events on the solar



Left: SOHO EIT Image of the Sun; Right: Ground Telescope Image of Feb. 26 Eclipse

surface, including explosive ones such as flares and coronal mass ejections, affect the corona and resulting solar wind. (Photo credit: Dr. Jay Pasachoff, Williams College, Williamstown, Mass., and the SOHO EIT Consortium.)

To view these images in color, go to Goddard's eclipse homepage at: <http://pao.gsfc.nasa.gov/gsf/eclipse/eclipse.htm>

## Universities Space Research Association Wins Contract for NASA Institute for Advanced Aerospace Concepts

By Nancy Neal, Office of Public Affairs

The Universities Space Research Association (USRA), in Columbia, Md., has recently been awarded a \$10.9 million cost-plus-fixed fee contract to establish the NASA Institute for Advanced Aerospace Concepts. The Institute for Advanced Aerospace Concepts will provide an independent, open forum for the analysis and definition of space and aeronautics advanced concepts. It will focus on revolutionary concepts, in particular systems and architectures that can have a major impact on the future missions of the NASA enterprises.

Goddard will supply administrative support, conference facility support, coordination of NASA systems engineering analysis, as well as facilitate any other technical assistance needed by the advanced concepts studies. "NASA is enthusiastic and excited about the Institute," said Sharon Garrison, the Institute's contracting officer's technical representative at Goddard. "We have high expectations of USRA's ability to accomplish this new endeavor in an exemplary manner. USRA's achievements with the Institute will be a source of pride for our nation." The three-year contract includes an option for an additional two years based on NASA's evaluation of the Institute's performance.

## tidbits

• **What's New on the Hill?** Visit the NASA Office of Legislative Affairs Homepage at: <http://www.hq.nasa.gov/office/legaff/>

• **Clark Mission** - After an extensive review, NASA has partially terminated the Clark Earth science mission due to mission costs, launch schedule delays, and concerns over the on-orbit capabilities the mission might provide. NASA will retain launch vehicle services. For the full text of this press release, visit the Goddard Homepage at <http://www.gsfc.nasa.gov> and choose **FLASH**

• **SNOE Launch** - The Student Nitric Oxide Explorer (SNOE) successfully launched at 11:04 p.m. PST on Nov. 25 from Vandenberg Air Force Base. For more information, visit the SNOE Homepage at <http://colorado.edu/snoe>



## Goddard's Technology Showcase:

### Advancing Science Through Technology Partnerships

by Lynn Sanders, Code 750

NASA's Goddard Space Flight Center is a leader and national resource in the development and utilization of today's cutting-edge technology. As the 21st century approaches, NASA not only must share its technologies, facilities and expertise with the Nation, but must continue to search for innovative approaches to the Nation's challenges. Collaborative partnerships could provide such solutions.

On March 25 and 26, in conjunction with the on-site American Institute of Aeronautics and Astronautics National Capital Section (AIAA NCS) Small Satellite Missions Symposium, Goddard will host its second technology showcase. As in 1996, Goddard will be exhibiting the technology initiatives and partnering opportunities developed in support of the Center's Earth and space science missions.

We invite our academic, industrial and government associates to explore the Technology Showcase '98. You may be surprised at what you discover! If you would like to attend, please register online at <http://mtm.gst.com/showcase/ss.html>

### Visit from the Mayor

Mayor Kurt Schmoke, the honorable Mayor of Baltimore, recently visited Goddard Space Flight Center in Observance of Black History Month.

During his visit, Mayor Schmoke gave a lecture presentation on the topic of "Achieving Dr. King's Dream Through Education."



Mayor Schmoke Stresses the Importance of Education

### Job Fair For Center Civil Servants

The Career Transition Assistance Program Center (CTAPC) is sponsoring a job fair for any civil servant who may be interested in employment opportunities with Goddard Contractors. This may also be an opportune time for those who are taking the Buyout. Mark your calendars for Friday, March 6, 1998 to talk with contractors in building 26, room 205, from 9:00 a.m. - 3:00 p.m.

The positions available include, but are not limited to, RF Engineers; Software Engineers and Developers; Network and Systems Engineers; Flight Operations; Client Server and Development F15 Mechanics; Y2K Testers; Computer Operators; Scientists; Technical Writers; Lan/Wan Administration; System Administrators; Year 2000 Conversion Programmer Analysts; Office Automation/Executive Assistants; Video Editors; Senior Test Consultants; Clerical and Computer Technicians; and more. Don't miss this opportunity!

## Announcing International Space Day

Space Day 1998, which will take place on May 21, was recently announced by astronaut Andy Thomas aboard the Russian Space Station, Mir. In his announcement, Thomas noted that the goal of Space Day is to advance science, math and technology education and inspire future generations to realize the vision of our space pioneers.

A series of major educational initiatives highlight Space Day. These include:

- **Cyber Space Day** - An intergalactic Teach-In broadcast on the web aimed at providing students of all ages with the chance to meet some of our space pioneers.
- **Outside the Envelope: Exploring Beyond Earth's Boundaries** - The Challenger Center for Space Science Education takes 4th through 8th grade students on an electronic field trip to show students how space missions unveil the mysteries of our universe.
- **Students Signatures in Space** - Elementary school students around the world will have an opportunity to send their signatures on a Space Shuttle Mission.
- **Cosmic EdVentures: Exploring Earth's Neighborhood** - Introduces children in grades 3 through 6 to the wonders of our solar system.

For more information, visit the official web site for Space Day at: [www.spaceday.com](http://www.spaceday.com)

### Call for 1998 Software of the Year Award Submissions

NASA has opened nominations for its 1998 Software of the Year Award, which recognizes software developed and owned by NASA. The award is sponsored by the Chief Information Officer, Lee Holcomb; the Chief Engineer, Daniel Mulville; and NASA's Inventions and Contributions Board (ICB). Last year, the competition resulted in nearly \$200,000 awarded. Full details on submitting applications can be found on the Goddard Internal homepage at <http://www.internal.gsfc.nasa.gov>

Entries and supporting material must be submitted by April 17. Information about the winner and the finalists from 1997 is available at the following URL: <http://www.hq.nasa.gov/office/codei/swy97win.html>

#### Clip-n-Save Clip-n-Save Clip-n-Save Clip-n-Save

#### March Events

• Scientific Colloquium Robert Wald	"Black Holes, Thermodynamics and the Information Paradox" (Bldg. 3 Aud.)	3/6 3:30 p.m.
• Ctr. Director's Colloquia Jerome Jewell	"New Mission, New Opportunity Finding One's Way Through Reorganization Without Getting Lost"	3/11
• Scientific Colloquium Clint Brooks	"Cryptography" (Bldg. 3 Aud.)	3/13 3:30 p.m.
• Engineering Colloquium Andre Bormanis	"Star Trek Science Logs: Exploring the Boundaries Between Science Fiction and Science Fact" (Bldg. 3 Aud.)	3/16 3:30 p.m.
• Engineering Colloquium David Wilkinson	"Map Anistropy Experiment" (Bldg. 3 Aud.)	3/23
• Director's Lobby Meeting	Code 300 - Building 6	3/25 3:00 p.m.

staff

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