



# MARSHALL STAR

Serving the Marshall Space Flight Center Community

April 24, 2003



Photo by Doug Stoffer, NASA/Marshall Center

## Racing toward victory

Marshall Center team members participating in the Health and Fitness Expo's 5K Run last week see victory in sight as they race toward the finish line. For more photos and race results, see pages 6-7.

## One NASA forges center alliances

*Editors note: This is the third in a series of articles that features an employee from each NASA center who has a "One NASA" story to share.*

*from the Jet Propulsion Laboratory*

Art Murphy points out four framed documents hanging on the wall of the Jet Propulsion Laboratory director's conference room.

"The goal is to have JPL and the other centers interact as One NASA," Murphy said. "Where we used to compete with each other, we are now working together."

Murphy manages Intercenter Alliance Development at JPL. He has been working

*See One NASA on page 3*

## Dealing with depression ...

### Employee Assistance Program available to all Marshall employees

by Jonathan Baggs

Depression, like the common cold, is an equal-opportunity affliction. No one is immune, and what makes some people feel better may not work for others.

Shortly after the STS-107 crew perished Feb. 1 in the Space Shuttle Columbia tragedy, NASA centers – the Marshall Center included – called in Critical Incident Teams, part of the Employee Assistance Program, to help employees deal with trauma and grief. While the initial shock of the Columbia loss has subsided, some employees may still have trouble dealing with unresolved issues related directly, or indirectly, to the tragedy.

Since the loss of Columbia, Huntsville psychiatrist Dr. Jane Roark and Huntsville psychologist Dr. Martha Baker, along with Dr. Bruce Mather, psychologist for the Marshall Employee Assistance Program, have been meeting with employees individually and in groups.

All Marshall civil service employees and their immediate

families are eligible for all counseling services, and can call 544-7549 for an appointment. All records and discussions are confidential.

Roark and Baker said getting extra help to people that need it is key to maintaining a healthy sense of self.

"It's the courageous thing to do. And it's the smart thing to do so problems don't get worse," Roark said. "Professionals have the ability to hide their emotional stress. Particularly the smarter they are, the better they hide it."

But stress eventually will come to the surface in some way – either psychologically or physically, said Roark. Some employees may experience flashbacks of television images showing Columbia breaking apart. Some may have trouble eating or sleeping, experience frequent headaches, chest pains or nausea. Some become argumentative or angry at the slightest perceived provocation, lose focus on their job or show a drop in productivity and

*See Depression on page 2*

# Depression

*Continued from page 1*

have problems making decisions. All are signs that an employee may need extra help, said Roark.

There is no "right" way to feel after experiencing emotional trauma, according to mental health experts. Some people may feel a combination of emotions, while others may appear to not be feeling anything. For some, there could be a "delayed" reaction to the Columbia tragedy – occurring long after the fact, when internal coping mechanisms fail. These reactions may occur weeks, months or years later – particularly on the anniversary of a traumatic event.

"This loss affects us in different ways and to different extents, as each individual reacts to the loss in their own unique way, and with their own unique coping skills," Mather said.

And sometimes these coping skills can fail. The result? Depression.

But is depression merely a feeling of helplessness, of being in a "blue mood," or is there more to it?

According to the National Foundation for Depressive Illness (NAFDI) – established in 1983 to provide public and professional information about affective disorders – everyone experiences variations in mood, transitory blues, disappointments, and the normal grief that accompanies the loss of someone you love or with whom you were connected. But a severe or prolonged depression that interferes with the ability to function, feel pleasure, or maintain interest is not a mere case of the blues. It is an illness. Researchers have demonstrated that it results from biochemical imbalances in the brain. These biochemical imbalances can be triggered by a traumatic event.

Depression is among the most common and destructive illnesses in the United States today. An estimated 35-40 million Americans will suffer major depressive illness during their lives, experts say. For each person directly suffering, three or four times that number of their relatives, employees, associates and friends also will be adversely affected. Many people also suffer from bipolar disorder, which is characterized by radical mood swings from severe depression to exaggerated, inappropriate elation.

Left untreated, depression takes its toll. The costs of failure to seek proper help are staggering — \$15-35 billion a year in terms of human suffering and economic loss, according to NAFDI.

But many people may be reluctant to seek treatment due to the perceived stigma attached to mental illness. Typical public attitudes toward depression and other affective disorders hold the individual responsible for his or her own illness. Most depressed people hold themselves responsible — a wrong attitude likely to

accelerate the depression, say NAFDI officials.

"I think it's only through education that we can break down stigmas against people seeking help for emotional problems," Baker said. "One of the things Dr. Roark and I did after the Columbia accident was to do some presentations to groups identified as most likely impacted by the Columbia accident. I think by talking to people and saying these are normal reactions and responses to a disaster, by talking honestly with each other, they are able to hear that their neighbor, relative or co-worker was able to benefit from professional help."

Baker said employees most susceptible to depression resulting from the Columbia tragedy might already have pre-existing problems, such as marital or family issues.

"I don't know that there is a demographic," Baker said, when asked about the typical employee who may be experiencing emotional freefall from the tragedy. "If a person has a pre-existing condition ... they may experience increased problems following the Columbia accident because they are experiencing more stress in other areas of their lives."

Then again, Baker said, employees who have had past experience dealing with tragedy – the death of a loved one, for example – might be coping better with the Columbia tragedy than someone who hasn't had similar personal experience.

Roark said Marshall employees have been "all over the map" in their thoughts and feelings since the Columbia tragedy "and that was perfectly normal."

The simple act of talking about the tragedy is a "universal coping strategy," Mather said. "Talk, talk and more talk. Take care of yourself by eating correctly. Start or continue an exercise program. Avoid major life decisions. Stick with a familiar routine and do those things that give you pleasure. Get involved with something meaningful to you."

Baker agreed. It's very helpful to get back into a routine," she said. "Talk to people in your support system. Hopefully you are getting back into a healthy routine – sleeping, eating right and moderate exercise. We know that moderate exercise can help people who are feeling depressed or stressed or anxious."

Group meetings or individual appointments are still open to Marshall employees.

"NASA and Marshall's administration have done a good job in the days, weeks and months that have followed the accident," Baker said. "Now, it's really up to the individuals to be proactive. And if someone needs to get help, to take that step."

*The writer, an employee of ASRI, is the editor of the Marshall Star.*

**"Talk to people in your support system. Hopefully you are getting back into a healthy routine -- sleeping, eating right and moderate exercise. We know that moderate exercise can help people who are feeling depressed or stressed or anxious."**

— **Dr. Martha Baker**  
**Huntsville psychologist**

# One NASA

*Continued from page 1*

in the spirit of One NASA for the last few years, forging collaborative alliances that proactively look for new initiatives in space research and development. The four documents on the conference room wall illustrate the collaborative agreements he helped develop between JPL and Langley Research Center (LaRC), Ames Research Center (ARC), Glenn Research Center (GRC), and Marshall Space Flight Center (MSFC).

Back in 2000, specific technology leadership within NASA was consolidated at various centers with little overlap. Murphy was managing JPL's Space Mission Technology Development at the time. Looking at the changes going on within the agency, he realized that it would be very difficult to develop mission-needed technology in this new environment. There were also more pressures on JPL to not do everything itself. In addition, revolutionary technology infusion was being demanded in JPL missions at no greater overall risk or cost. He saw a need to start collaborating with other centers in order to develop the needed complete technology package for JPL missions.

Murphy identified Langley, Ames, Glenn, and Marshall, as the centers with the best immediate potential for joint activities with JPL. His idea was to build an interdependent relationship with each of these centers to use their research and technology development capabilities in JPL's space and Earth science flight missions. He put together a proposal and, on Jan. 24, 2001, he met with the JPL Executive Council. If JPL more actively collaborated with these centers to do research and development for technology it would enable JPL to do better science. The Executive Council agreed.

Murphy was asked to establish these four collaborative alliances. Langley signed the first alliance agreement on Feb. 21, 2002. The other agreements were finalized by the end of that year. These alliances require minimal formal reporting.

"This is a center grass roots and up effort to show that centers have the right ideas and attitude," Murphy said.

A joint center review is held approximately every six months for each alliance. The last one was held at JPL with Ames on Jan. 23, 2003.

"Our relationship with Ames has improved an order of magnitude," Murphy said. "Our relationships are also much better with Langley, Glenn and Marshall. We are working together like we didn't always do in the past. In some ways, the only time we saw another center then was when we competed for technology work against them. The center directors have been magnificent, very positive about working together."

Currently, Ames is funding approximately 80 JPL engineers



Marshall Imaging Services

**Art Murphy, the Jet Propulsion Laboratory's manager of Interactive Center Alliance Development, with four collaborative agreements between JPL and other NASA centers.**

and scientists on various technical tasks that compliment ARC's expertise in the engineering of complex systems, mission autonomy systems, information technology and bio-nanotechnology. Ames will have planning and visualization software technology on both JPL's Mars Exploration Rover ground operations activities. Ames gets to use its technology on JPL missions and receives strong advocacy for new technology initiatives. Ames' technology, in turn, saves JPL the cost of many ground mission engineers.

These alliances are paving the way for future missions such as Jupiter Icy Moons Orbiter by providing technology for them. They will continue to pay off in developing research and development technology for future missions that are about five-to-15, or more, years out.

"The future is enabled by the present," Murphy said. "The future of space is complicated. One center can't be all things to all people like it used to be. We have to be able to depend on other organizations, work with them, nourish them and treat them as we do ourselves. JPL can't maintain the core technology competencies for everything so we have to go to other centers for them. We need to have strong relations so we can count on other centers as team members and work with them to do our missions."

JPL's director, Charles Elachi, summed up the importance of these efforts. "I believe we owe it to American taxpayers to be as efficient as possible in developing these potentially high-payoff, bold missions, by using the best technologies from all NASA centers to generate the most exciting and productive science possible," he said. "I'm pleased that our alliances contribute to the One NASA initiative, and I'm grateful to Art Murphy and his colleagues at our partner centers for being so persistent and effective in constructing these alliances."

# Change in issuing retiree identification badges

The world has changed dramatically since Sept. 11, 2001.

The growing threat environment, as well as common-sense business and security practices, has necessitated the rethinking of how access is granted to all government facilities, including NASA centers. As a result, the Agency recently revised its policy on issuing identification badges to include those badges issued to NASA civil service retirees.

Previously, the Center issued you a "NASA Retiree Badge," and you were

also allowed to keep your vehicle decals upon your retirement.

The new Agency policy calls for the replacement of the NASA retiree badge and decal with a standardized, wallet-size identification card.

Unlike the retiree badge, the new card does not afford you routine access to the Center, but rather may be used to quickly obtain a Marshall visitor badge if you visit the Center on official business.

New guidelines provide you with the information you need to obtain the new card and to fully understand the proce-

dures established should you need to visit the Center in the future.

As long-standing contributors to the overall success of NASA's missions, you remain valued members of the NASA community and are welcome to visit the Center at any time you have business. If you have questions on this matter, please contact Becky Hopson in the Protective Services Department at 544-4541 for assistance.

— Art Stephenson  
Marshall Center Director

## ***Guidelines for civil service retirees to obtain the new NASA retiree card and for visiting the Marshall Center***

- When you return for your next visit to the Center, you will be given the opportunity to obtain the new wallet-sized NASA retiree card that indicates that you are a retired employee in good standing.

- If you currently have the old NASA retiree identification badge, you may retain it as a memento. However, the U.S. Army no longer will recognize the retiree badge as valid for entry after Wednesday, April 30, 2003.

- Before April 30, 2003, you may use your old retiree badge to enter the installation and go to the Identification and Registration Office, Building 4312, to request the new retiree card. At that time, you will be asked to turn-in your vehicle decal and be provided a self-addressed envelope and requested that you scrape any additional decals off your vehicles and mail them to the Center. Remember, the new retiree card plus a vehicle decal does not allow you to enter the Installation.

- After April 30, 2003, if you arrive at a Redstone gate and present the old retiree identification badge, Redstone security will keep your badge and deny you entry unless your name has been placed on the Visitor Access List posted at the gate. **IT IS IMPORTANT THAT YOU NOT SHOW YOUR RETIREE BADGE TO GAIN ENTRY OR IT WILL BE CONFISCATED PERMANENTLY.**

- If you have a need to visit the Center in the future, any on-site NASA sponsor may enter your name into the new Web-based Visitor Management System by 2 p.m. the day prior to your visit. A list of approved visitors is provided to

all Redstone gates on a daily basis. Special arrangements will be made for events such as the annual picnic and Retiree Association meetings. In addition, a NASA sponsor may also accompany you through the Redstone gate at any time without prior approval. You will need to show appropriate identification to the gate security officer.

- If your name is on the list, Redstone security will grant you entry to the installation, and you can proceed to either Bldg. 4312 or the Bldg. 4200 lobby to be issued an official visitor badge and key card for the duration of your visit.

- As an authorized visitor, you do not have to be escorted around the Center, and you may visit multiple facilities as long as you have been sponsored on legitimate NASA business. Please remember that you must visibly wear your visitor badge at all times.

- If you are a member of the MSFC Wellness Center, you may receive a Wellness Center identification badge and MSFC decal. This badge and vehicle decal will allow you access through the Redstone gates and access to the Wellness Center. However, you are reminded that the Wellness Center identification badge is issued for participation in Wellness Center activities only and does not give you access to other MSFC facilities.

- If you are a patron of the barbershop, cafeterias, or the Redstone Federal Credit Union, you are considered a visitor and must be entered into the Visitor Management System.



# Huntsville area high school students turn dreams into reality with NASA's Student Launch Initiative on May 3

by Grant Thompson

Students from four Huntsville area high schools get their chance to prove they have the "right stuff" May 3. That's when the rockets designed and built by student teams during the school year lift off as part of NASA's high-flying Student Launch Initiative.

The event, sponsored by the Marshall Center, will be held at an Army test range on Redstone Arsenal. Participating schools include Johnson High School and New Century Technology High School in the Huntsville city system, Sparkman High School in the Madison County system, and Bob Jones High School in the Madison city system.

Each team, under the guidance of Marshall Center engineers, will launch a reusable rocket, aiming for an altitude of one mile, and carrying a science payload. After recovering the payload focused on biology, physics or model rocketry improvement, students will investigate the effects of low gravity on their projects.

Including the one-mile goal, Marshall engineers evaluate

the students on their rocket design, including propulsion, materials, payload, and safety features.

"This event highlights one of NASA's missions: to inspire the next generation of explorers," said Jim Pruitt, manager of the Education Programs Department at the Marshall Center. "These students work hand-in-hand with NASA mentors, which gives them an opportunity to see the real-world challenges faced daily by NASA engineers, designers and scientists. Developing problem-solving and design skills takes on additional excitement when combined with model rocketry. The benefits of such an experience are immeasurable."

Marshall's Student Launch Initiative is a hands-on, interdisciplinary learning program for high school students at schools within a 50-mile radius of Huntsville.

For more information, visit the Student Launch Initiative Web site at <http://education.msfc.nasa.gov/docs/127.htm>.

*The writer, employed by ASRI, supports the Media Relations Department.*

## Marshall Prime Contractor Supplier Council aims to strengthen diversity

by David E. Brock

The first Marshall Prime Contractor Supplier Council (MPCSC) meeting was held recently to create a productive environment for networking among Marshall Center prime contractors.

The primary focus of the council is to strengthen diversity within Marshall's subcontracting programs and to develop a forum for exchange of information.

The result will be the creation of a model subcontracting program and best-practices manual to be shared with all prime contractors supporting NASA.

ATK Thiokol hosted the event at its canyon retreat facility in Ogden, Utah.

Attending were 11 prime contractor supplier diversity specialists representing eight Marshall Center prime contractors.

Representatives from Marshall included David Brock and Stanley McCall from the Procurement Office, Ralph Young from the Manufacturing Department, and Vic Scheuplein from the Safety & Mission Assurance Office.

The Council was initiated by the Marshall Industry Assistance Office and several Marshall prime contractor supplier diversity



The Prime Contractor Supplier Council poses during its meeting with prime contractor representatives from the Marshall Center during the council's first meeting in Ogden, Utah.

specialists.

The next council meeting is set for late August in Huntsville and will be hosted by Teledyne Brown Engineering.

*The writer is the industry assistance officer in Marshall's Procurement Office.*

Courtesy photo/Marshall Imaging Services

# Marshall team gets in shape during

The fifth annual Health and Fitness Expo at the Marshall Center was April 16 at the Bldg. 4316 Activities Center. Vendors and exhibitors from the medical and fitness industry featured displays, door prizes and health information.

Marshall team members took advantage of free massages, blood pressure checks and even acupuncture.

The annual “Walk for the Health of It” attracted participants from all of Marshall’s directorates. Two “Golden Shoe” trophies were awarded -- one to the Engineering Directorate for having the most participants and one to the Equal Opportunity Office for the highest percentage of participants.

A 5K run topped off the day with more than 60 contestants.



Photos by Doug Stoffer, NASA/Marshall Center

Bill Kilpatrick, left, director of the Engineering Directorate, accepts the “Golden Shoe” trophy from Marshall Director Art Stephenson for the directorate with the highest number of participants in the walk.



Charles Scales, left, director of the Equal Opportunity Office, accepts a “Golden Shoe” trophy from Marshall Director Art Stephenson for the directorate with the highest percentage of team members participating in the walk.



Marshall team members participate in the “one-mile fun walk.”



Mike Neeley, left, adjusts the acupuncture needles in Jerry Maywell’s hand.



# fifth annual Health and Fitness Expo

## 5K run results

Category	Time
<b>Overall Male</b>	
James Burnum	19:25
<b>Overall Female</b>	
Julie Sanchez	26:50
<b>Female 25-29</b>	
1. Amy Jupin	37:49
<b>Female 30-34</b>	
1. Cheryl Fletcher	27:39
2. Pam Coons	33:58
<b>Female 35-39</b>	
1. Stacy Counts	28:44
2. Annie Matisak	32:16
3. Holly Cagle	34:10
<b>Female 40-44</b>	
1. Myscha Crouch	30:44
<b>Female 45-49</b>	
1. Faye Jernigan	30:11
2. Teresa Danne	36:09
3. Julie Heinisch	41:36
<b>Female 50-54</b>	
1. Linda Dinges	32:33
2. Kathy Brown	37:32
3. Pat Avery	39:10
<b>Male 25-29</b>	
1. Nathan Coffee	21:14
2. Ryan Decker	23:15
3. Allen Blair	27:05
<b>Male 30-34</b>	
1. Bob Engberg	21:21
2. Paul Patterson	22:50
3. James Bailey	30:39
<b>Male 35-39</b>	
1. Tim Horvath	19:42
2. Greg Dukeman	21:56
3. Mike Ogles	23:09
<b>Male 40-44</b>	
1. Paul Thompson	20:46
2. Byron Bartlow	22:20
3. Andre Lang	24:24
<b>Male 45-49</b>	
1. Don Hillis	20:42
2. Gary Moore	21:24
3. Gary Jedlovec	22:26
<b>Male 50-54</b>	
1. Fred Davey	25:26
2. Dennis Parton	27:12
3. Wayne Tankersley	30:07
<b>Male 55-59</b>	
1. Gene Hartsfield	24:48
2. John McDougale	25:46
<b>Male 60-64</b>	
1. Roger Chassay	24:53



Photo by Doug Stoffler, NASA/Marshall Center

## 5K race winners

James Burnum, left, and Julie Sanchez, were the overall male and female 5K Run winners during the Marshall Center's Health and Fitness Expo last week.

## Overall race results

Place	Name	Time
1	James Burnum,	19:25
2	Tim Horvath,	19:42
3	Don Hillis,	20:42
4	Paul Thompson,	20:46
5	Nathan Coffee,	21:14
6	Bob Engberg,	21:21
7	Gary Moore,	21:24
8	Greg Dukeman,	21:56
9	Byron Bartlow,	22:20
10	Gary Jedlovec,	22:26
11	Paul Patterson,	22:50
12	Mike Ogles,	23:09
13	Ryan Decker,	23:15
14	David Howell,	23:32
15	Andrew Keys,	24:05
16	Andre Lang,	24:24
17	Jeff Adams,	24:30
18	Gene Hartsfield,	24:48
19	Dave Whitten,	24:52
20	Roger Chassay,	24:53
21	Kenneth Goggans,	24:59
22	Fred Davey,	25:26
23	Richard Siler,	25:30
24	Raymond French,	25:38
25	Steve Robbins,	25:41
26	John McDougale,	25:46
27	Kirt Holder,	25:51
28	Mark Baker,	25:57
29	Steve Whitfield,	25:57.5
30	Andy Heaton,	26:43
31	Julie Sanchez,	26:50
32	Jeff Spencer,	27:03
33	Allen Blair,	27:05
34	Toan Vu,	27:08
35	Dennis Parton,	27:12
36	Matt McCollum,	27:35
37	Cheryl Fletcher,	27:39
38	Frank Thomas,	28:00
39	Stacy Counts,	28:44
40	Rick Natividad,	28:44
41	Brian Speer,	28:55
42	Gray Marsee,	29:18
43	Wayne Tankesley,	30:07
44	Faye Jernigan,	30:11
45	James Bailey,	30:39
46	Myscha Crouch,	30:44
47	Jeremy Lang,	30:46
48	Martin Carson,	30:56
49	Nelson Parker,	31:01
50	Annie Matisak,	32:16
51	Brian Matisak,	32:16
52	Linda Dinges,	32:33
53	Pam Coons,	33:58
54	Holly Cagle,	34:10
55	Johnnie Wilson,	34:40
56	Ellen Manning,	34:51
57	Ed Killingsworth,	34:53
58	William Hicks,	35:39
59	Teresa Danne,	36:09
60	Mike Sosebee,	36:09
61	Kathy Brown,	37:32
62	Amy Jupin,	37:49
63	Pat Avery,	39:10
64	Pati Brinkley,	40:50
65	Carol Boggan,	41:36
66	Julie Heinisch,	41:36

# Rising storms revise story of Jupiter's stripes

JPL release

**P**ictures of Jupiter, taken by a NASA spacecraft on its way to Saturn, are flipping at least one long-standing notion about Jupiter upside down.

Stripes dominate Jupiter's appearance. Darker "belts" alternate with lighter "zones." Scientists have long considered the zones, with their pale clouds, to be areas of upwelling atmosphere, partly because many clouds on Earth form where air is rising. On the principle of what goes up must come down, the dark belts have been viewed as areas where air generally descends.

However, pictures from the Cassini spacecraft show that individual storm cells of upwelling bright-white clouds, too small to see from Earth, pop up almost without exception in the dark belts. Earlier spacecraft had hinted so, but not with the overwhelming evidence provided by the new images of 43 different storms.

"We have a clear picture emerging that the belts must be the areas of net-rising atmospheric motion on Jupiter, with the implication that the net motion in the zones has to be sinking," said Dr. Tony Del Genio, an atmospheric scientist at NASA's Goddard Institute for Space Studies, New York. "It's the opposite of expectations for the past 50 years".

Del Genio is one of 24 co-authors from America and Europe reporting diverse results from the Cassini imaging of Jupiter in the journal "Science."

Cassini's camera took about 26,000 images of Jupiter, its moons and its faint rings over a six-month period as the spacecraft passed nearby two years ago.

"The range of illumination angles at which Cassini viewed Jupiter's main ring gives insight about particles in the ring by the way they scatter sunlight. The particles appear to be irregularly shaped, not spheres," said camera-team leader Dr. Carolyn Porco of Southwest Research Institute, Boulder, Colo. "They likely come from surfaces of one or more moons being eroded by micrometeoroid impacts."

Spherical particles would suggest an origin as melted droplets, not erosion. In addition, Cassini imaging shows the degree to which the orbits of two small moons near the ring, Metis and Adrastea, are inclined matches the vertical thickness of the ring. That points to those moons as sources of the ring particles, said Porco.

One surprise in ultraviolet images of Jupiter's north polar



Photo by Dennis Olive, NASA/Marshall Center

## Vortex combustion chamber test

More than 30 tests recently were conducted at the Marshall Center's Test Stand 115 to evaluate a "self-cooled" vortex combustion chamber, which relies on tangentially injected propellants from the chamber wall and resulting centrifugal forces to keep the relatively cold propellants near the wall. This in-house technology investigation was a joint effort of Marshall engineers and the U.S. Army Missile Command at Redstone Arsenal. Huu Trinh and Cynthia Sprader of the Marshall Center's Space Transportation Directorate were the task manager and test engineer, respectively, for the work.

region is a swirling dark oval of high-atmosphere haze the size of the planet's famous Great Red Spot.

"It's a phenomenon we haven't seen before, so it gives us new information about how stratospheric circulation works," said Dr. Robert West of NASA's Jet Propulsion Laboratory, Pasadena, Calif. The results show the winds and the life cycle of clouds in the stratosphere.

Also, movies of infrared images reveal persistent bands of globe-circling winds extending north of the conspicuous dark and light stripes.

"The planet's appearance at high latitudes is like leopard spots, but when you see it in motion, it's interesting that all the spots at one latitude move in one direction and all the spots at adjacent latitudes move the opposite direction," said Dr. Andrew Ingersoll of the California Institute of Technology, Pasadena.

Other discoveries reported include atmospheric glows of the large moons Io and Europa during eclipses, a volcanic plume over Io's north polar region, and the irregular shape of a small outer moon, Himalia.

"The Jupiter results provide some hints of the spectacular new findings that await Cassini when it reaches Saturn," Dr. Larry Esposito of the University of Colorado, Boulder, principal investigator for Cassini's ultraviolet-imaging spectrograph instrument, predicts in a separate commentary in Science about the Cassini camera results at Jupiter.

Cassini will begin orbiting Saturn on July 1, 2004, and will release its piggybacked Huygens probe about six months later for descent through the atmosphere of the moon Titan.



# If it's spring, it must be time for the 'Trike-a-thon'

Each year, the Marshall Child Development Center lets its students bring their favorite wheeled vehicle for a 'Trike-a-thon.'

The sunny days and cool mornings of spring make excellent "triking" weather.



Caleb Clark, left, and Rachel Harris take a break from the day's action.



Mac Delay, center, keeps his eye on Helen D'Agostino, left, as she tries to pass him on the outside.

Photos by Marshall Imaging Services



Coleman Coffee gets some pointers from his dad, Nathan Coffee.



Carson Counter, left, is gaining speed while Jackson Durham, center, slows to adjust his helmet allowing Helen D'Agostino, right, to make a break for the lead.

## Job Announcements

**MS03N0075**, Center Operations Support Specialist. GS-301-12, Center Operations Directorate, Integrated Customer Support Department, Operations and Sustaining Support Group. Contact: Dana Blaine at 544-7514. Closes April 24.

**MS03C0077**, Administrative Officer. GS-341-07 (promotion potential to GS-11), Procurement Office. Contact: Allan Day at 544-4079. Competitive Placement Plan. Closes April 25.

**MS03C0080**, AST, Engineering Project Management. GS-801-15, Engineering Directorate, Engineering Systems Department. Contact: Gene Fundum at 544-3366. Competitive Placement Plan. Closes April 24.

**MS03C0081**, Supervisory Security Officer. GS-00080-15, Center Operations Directorate, Protective Services Department. Closes April 25.

For a complete list of vacancy announcements, go to [http://www1.msfc.nasa.gov/INSIDE/announcements/msfc\\_jobs.html](http://www1.msfc.nasa.gov/INSIDE/announcements/msfc_jobs.html).

### Energy tip

Landscaping with native plants reduces the need for extra watering. When using a hose or movable sprinkler, control the flow with an automatic shut-off nozzle.

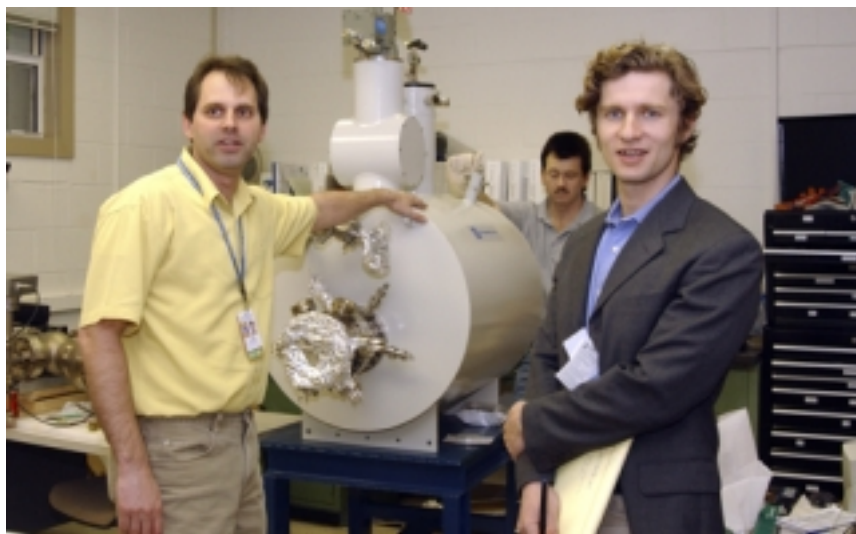


Photo by Doug Stoffler, NASA/Marshall Center

### Forbes writer visits Marshall

James Martin, left, lead for the Advance Energetics Team and an aerospace engineer with the Propulsion Research Center, discusses an experiment with Tomas Kellner, right, a staff writer with Forbes magazine. Kellner recently toured the Marshall Center in preparation for an article on Huntsville.

## Obituaries

**Max E. Mallernee, 83**, of Huntsville, died March 31.

Funeral services were held at First United Methodist Church with Dr. Don Cross and the Rev. Coy Hallmark officiating. Burial was in Maple Hill Cemetery with Laughlin Service Funeral Home directing.

Mallernee was born Feb. 20, 1920. He

was an Air Force veteran of World War II and moved to Huntsville in 1958. He retired from NASA after 25 years of service. He was the widower of Anna Rachel Mallernee.

He is survived by two sons, Don C. Mallernee of Murfreesboro, Tenn., and Dr. Stephen V. Mallernee of Houma, La.; four grandchildren; and one great-grandchild.

## EnviroFacts

- Using 1,000 disposable plastic teaspoons consumes 10 times more energy and natural resources than manufacturing one stainless steel teaspoon and washing it 1,000 times.
- The United States consumes about 25 percent of the world's resources, but has less than 5 percent of the world's population.
- The federal government purchases more than \$200 billion worth of goods and services each year, but state and local governments purchase more than \$1 trillion worth of goods and services.
- Scientists estimate an average of 137 species of life forms are driven into extinction worldwide every day. That's a loss of 50,000 species every year.

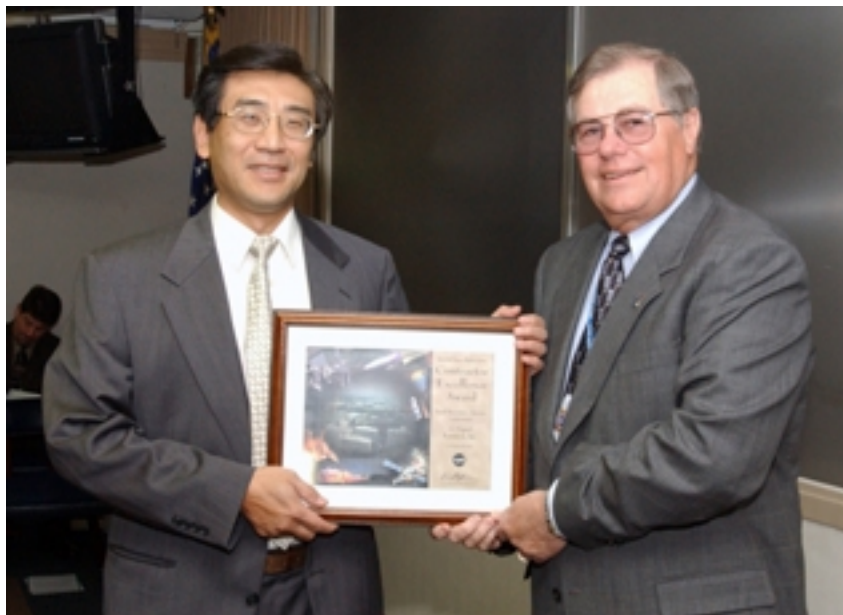


Photo by Doug Stoffler, NASA/Marshall Center

### ASRI wins Contractor Excellence Award

Dr. Jen-Yi Jong, left, president of Ai Signal Research Inc., receives the Marshall Center's 2002 Contractor Excellence Award in the small business category from Marshall Associate Director Axel Roth.

# Center Announcements

## New print servers added to IDS Utilities at Marshall

Three new print servers have been added to the IDS Utilities folder at the Marshall Center. Employees should delete their current installed printer and then install their printer from one of the new servers. The old print server will be retired April 30. For print queues of the new servers, see "Inside Marshall." Call 544-HELP, Option 7, for questions regarding how to load the print queue.

## Dial-in and VPN require security registration

Marshall team members who use the Virtual Private Network software to connect to the Marshall Private Network, or who dial directly into the network from home or TDY, must apply for a MSFC RSA SecurID Token in April, May or June. For more information, including frequently asked questions and an updated schedule to apply, go to [http://www1.msfc.nasa.gov/INSIDE/announcements/dial\\_in\\_token.html](http://www1.msfc.nasa.gov/INSIDE/announcements/dial_in_token.html).

## Shuttle Buddies to meet

The Shuttle Buddies will meet at 9 a.m. Monday at Mullins Restaurant on Andrew Jackson Way in Huntsville. For more information, call Deemer Self at 881-7757.

## Dinner to celebrate J.F. Drake State Technical College

A dinner celebrating more than 40 years of educational excellence and service of J.F. Drake State Technical College will be at 7 p.m. May 1 at the Von Braun Center North Hall. The Marshall Center's Education Department, Government and Community Relations Department, and the Customer and Employee Relations Department are sponsoring a NASA/Marshall table to support the event. Tickets cost \$50 and reservations are due by April 25 to Rosa Kilpatrick at 544-0042..

**For more Center Announcements, see "Inside Marshall"**

## Thrift Savings Plan season open

The Thrift Savings Plan open season closes June 30 for employees wanting to begin, increase or decrease, contributions to their account. For more information, see "Inside Marshall" or call 544-5654 or 544-7536.

## Astronomy program is Saturday

The Von Braun Astronomical Society will present a program on "Wimps and Machos at the End of the Universe" by astronomer Dr. Rob Preece. The event is at 7:30 p.m. Saturday at the Von Braun Planetarium in Monte Sano State Park. Admission is \$3 for adults and \$2 for children 12 and under. For details, call Mitzi Adams at 961-7626.

## LatinFest Dance set for May 3

The Alabama Hispanic Association is sponsoring a "LatinFest" dance at 9 p.m. on May 3. Dance lessons begin at 8 p.m. at the Senior Center on Drake Avenue at Ivy Avenue in Huntsville. For more information, call 544-6658.

## 'Relay for Life' set

The Madison County chapter of the American Cancer Society will have a "Relay for Life" from 7 p.m. May 2 to 7 a.m. May 3 at Milton Frank Stadium off Bob Wallace or Drake Avenue in Huntsville. For more information, call Jenny Huie at 535-1090, 1-800-ACS-2345 or go to [www.cancer.org](http://www.cancer.org).

## Disability awareness training required for all civil servants

In a few weeks, the Employee and Organizational Development Department will offer an online disabilities awareness training course and all civil servants are required to participate. The training is designed to heighten awareness and knowledge of regulatory requirements under the Rehabilitation Act and help the workforce understand the special needs of employees with disabilities. The training touches on all five of the Marshall Center values. Credit will be received in training records for those taking the course.

## Marshall Association luncheon will be May 13

The Marshall Association will host a luncheon from 11:30 a.m.-1 p.m. May 13 at the Redstone Officers' and Civilians' Club. John Gordon, meteorologist in charge of the weather forecast office for the National Weather Service in Huntsville, will speak. The luncheon costs \$9, payable at the door, but reservations are required and can be made by e-mail to Cliff Bailey or by calling 544-5482.

## Karate Club offering Tai Chi

The Marshall Seibukan Karate Club is offering Tai Chi as a form of exercise for health and mobility. The club also is offering "beginner friendly" karate classes on Mondays and Wednesdays from 3:45-4:45 p.m. For more information, see "Inside Marshall" or contact Bill Mayo at 544-7564.

## Innovator's Forum is Tuesday

The Technology Transfer Department and Marshall Patent Counsel will host an informal "Innovator's Forum" from 1-3 p.m. Tuesday in Bldg. 4316. Information tables will be staffed with personnel to answer questions on new technology reporting, patenting, incentive awards, licensing and commercialization, software release, Space Act Agreement processes, Center Director's Discretionary Fund and the Technology Investment Projects Program. The forum is open to all Marshall team members. For more information, call Dena Thurmond at 544-6105.

## Free Huntsville Stars tickets available for May 3 game

The Boeing Co. has given 3,000 tickets to the Marshall Center for team members to attend the Huntsville Stars vs. Chattanooga Lookouts baseball game at 7:05 p.m. May 3. One ticket will admit four and tickets can be upgraded to upper or lower box seats for \$4 per person. Tickets are available at the Space Shop in Bldg. 4203 and the Wellness Center, Bldg. 4315.



# Employee Ads

## Miscellaneous

- ★ Turbo-Glider exerciser, still in box, \$65. 534-6032
- ★ Gas powered log splitter, \$650; Ashley wood burning stove, \$350. 722-8004 after 5 p.m.
- ★ Trailer, 16', hideaway ramps, tandem axle, metal floor, \$1,500. 723-3440
- ★ Tractor, Ford 2000, w/front loader, new bucket, new box scraper, \$4,800. 216-8868
- ★ King-size solid oak waterbed, mirrored headboard w/bookcase, \$100. 351-6066/656-2965
- ★ Cultivator, edger, blower, string trimmer attachments for Ryobi 970R, \$75. 922-1424
- ★ AKC Australian Shepherd puppies, 9 wks, old, shots, wormed, two males, \$300. 828-3668
- ★ IH four-row planter w/1000 gal. Herbicide tank attached, \$975. 852-5446
- ★ Men's golf clubs, 3-PW, driver, 3-wood, 5-wood, graphite shafts, \$75; Taylor-Made sandwedge, \$25. 828-8005
- ★ Wilton cake pans, Easter Bunny, Taz, Pooh, Tigger, Xmas Bear, Santa, Barbie, \$5 each. 508-9503
- ★ Couch w/built-in recliners and matching loveseat, \$150; bunk-bed w/mattress, \$100. 464-0710
- ★ Nordic Track Pro Plus ski machine, care kit included, \$150. 772-3584
- ★ Kenwood MC-50 HAM radio desk microphone w/Shure DX element, \$100. 656-2965/351-6066
- ★ Yamaha upright piano, walnut finish, \$2,600. 837-5580
- ★ Painted wood desk w/7 drawers, desk area 18"x42", \$50. 533-4824
- ★ Walnut Danish Modern double bed, \$50; matching dresser w/mirror, \$40. 533-1797
- ★ John Deere 210 lawn tractor, new seat/deck bearings, \$875; Chevy winch bumper, \$45. 683-9364
- ★ Blue sofa, two cushion seat, 74" long, \$200. 536-8414
- ★ Montgomery Ward men's 3-speed bike, 26", blue, new tires, \$40. 883-1869
- ★ Receiver hitch, tool box, bed-liner, fits 88-96 Chevy/GMC step-side pickups. 852-2438 after 4 p.m.
- ★ Two Jet Skis, 1993 Waveblaster, 1991, VSR 650, plus trailer, \$2,800. 461-9182
- ★ 1971 Somerset ski boat, 170HP I/O, walk-thru windshield, rust-free trailer, ski equipment, \$3,500. 883-0244

- ★ Aquarium, 10 gallon, power filter and two large gold fish, \$15. 881-4148
- ★ Airstream trailer; Troy-bilt tiller; electric lift chair; Reader's Digest condensed books. 881-6040
- ★ Air conditioner, 25,000 BTU, window unit, \$225; Hot Point dryer, \$95; Frigidaire washer, \$95. 837-6649
- ★ Oak twin bedroom set; 2-beds w/wooden rails, mattress sets, dresser, mirror, chest, comforter, \$1,100. 722-5282
- ★ Apollo Command Module model kit. Large 1/32 scale. Never assembled, complete w/box. \$50. 306-0700/303-3702

## Vehicles

- ★ 2001 Chevy Tahoe LT, 4WD, 34K miles, loaded, seats eight, \$27,500. 256-828-0103
- ★ 1999 Ford Ranger XLT Sport, 6 cyl., CD, cruise, power windows/locks, fiberglass truck cap, \$9,800. 859-0729
- ★ 1988 Mazda B2200, extended cab truck, one-owner, 133K miles, \$1,850. 650-5895
- ★ 1976 Chevrolet, V8, power brakes/steering, 4-door. 837-0621
- ★ 1992 Chevrolet Astro van, extended XL, CD player, rear A/C, \$3,950. 722-8116
- ★ 1991 Toyota Camry DX, automatic, power windows, 180K miles, \$1,200. 883-1468
- ★ 2003 Lexus RX300, AWD, Nav. Heated seats, all options, \$34,500. 325-7256/426-8001
- ★ 1996 Mitsubishi 3000GT coupe, 2-door, V6/3.0L, pearl white, automatic, 73K miles, loaded, \$9,995. 895-9050
- ★ 1992 BMW 735iL, gold, leather interior, automatic, moonroof, 182K miles, \$6,750. 464-9866
- ★ 1998 Toyota Tacoma, extended cab, green, SR5 package, 190K miles \$8,500. 509-9550
- ★ 1989 Chrysler New Yorker, V6/3.0L, 4-door, black, all-power, 125K miles, \$1,400. 881-5522
- ★ 1996 Nissan Quest, green, 143K miles, A/C, PW/PDL, \$4,500. 256-479-1331/534-9739
- ★ 1991 F250 truck, 4x4, 7.3 diesel, auto, black, PW/PDL, new tires, 125K miles, \$6,500. 431-3551
- ★ 1995 Explorer, Eddie Bauer, leather, power seats/windows/locks, 108K miles, hitch, \$6,900. 880-6563
- ★ 1991 Toyota Camry DX, automatic, power windows, 180K miles, \$1,250. 883-1468
- ★ 1996 Buick Regal GranSport, low mileage, fully loaded, moon roof, one-owner, \$8,500. 653-9124

- ★ 1997 Nissan Maxima SE, 4-door, 82K miles, pearl white, automatic, CD, new brakes, \$10,200. 881-8674
- ★ 1997 Honda Accord LX, 4-cyl., green, 4-door, automatic, CD, power windows/locks, 69K miles, \$8,250. 256-340-1166/654-1166
- ★ 1998 Jeep Wrangler SE, blue, tan soft-top, CD, manual transmission, 4x4, 22K miles, \$8,000. 256-990-0033
- ★ 1996 Monte Carlo LS coupe, V6, green, loaded, auto, 91K miles, garage kept, \$5,500. 350-3226
- ★ 2000 Ford Windstar, maroon, 2-sliding doors, 68K miles, \$13,250. 828-7377

## Wanted

- ★ Metal baker's rack. 536-9771
- ★ Used paddle boat in good condition. 461-9182
- ★ Scuba diving computer or analog pressure-depth gauge console; used BCD. 895-9592/ Paul

## Free

- ★ Firewood. 722-8004 after 5 p.m.
- ★ Fill dirt, you load, you haul. 656-5552/351-6066
- ★ Large wood dog house, red, shingled roof. 464-8506
- ★ Murray 22" push lawnmower w/3.5HP Briggs & Stratton engine. 880-1544
- ★ Beagle/Border Collie, male dog, 9 mo. old, needs yard or big house. 774-3467

## Found

- ★ U.S. currency, Bldg. 4200 area; Ladies Ring, Bldg. 4471 area. 544-3623 to claim/identify
- ★ Ladies sunglasses, Bldg. 4200 area. Call 544-3623 to claim/identify

## Lost

- ★ Small green Swiss Army knife, sentimental value. 544-5295/Tim

# MARSHALL STAR

Vol. 43/No. 30

Marshall Space Flight Center, Alabama 35812  
(256) 544-0030  
<http://www1.msfc.nasa.gov>

The Marshall Star is published every Thursday by the Internal Relations and Communications Department at the George C. Marshall Space Flight Center, National Aeronautics and Space Administration. Contributions should be submitted no later than Monday noon to the Marshall Internal Relations and Communications Department (CD40), Bldg. 4200, room 101. Submissions should be written legibly and include the originator's name. Send electronic mail submissions to: [intercom@msfc.nasa.gov](mailto:intercom@msfc.nasa.gov) The Marshall Star does not publish commercial advertising of any kind.

Manager of Internal Relations  
and Communications — Steven Durham  
Editor — Jonathan Baggs

U.S. Government Printing Office 2002-533-083-60050

Permit No. G-27  
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