



To support Space Station experiments

New Marshall laboratory building to be dedicated Friday

by Bob Thompson

A new building, dedicated to develop and support science experiments to be flown on the Space Shuttle and International Space Station, will be officially dedicated at the Marshall Center Friday.

The new Microgravity Development Laboratory will be dedicated at a ceremony at 10 a.m. to include NASA, community and university leaders. Microgravity research uses the near-weightless environment of space as a tool for unlocking scientific mysteries which may result in new technologies such as new super-alloys, better computers and new disease-fighting drugs.

Joel Kearns, manager of NASA's Microgravity Research Program at the Marshall Center, will preside at the ceremony. Speakers will include Carolyn Griner, deputy director of the Marshall Center; Dr. Bradley Carpenter, acting director of

Microgravity Research Division in the Office of Life and Microgravity Sciences and Applications at NASA Headquarters in Washington, D.C.; and Robert Rhome, former director of the Microgravity Research Division at NASA Headquarters.

The facilities at the new Microgravity Development Laboratory will allow researchers to take their experiments from the design board, into orbit and back again from one location. This one-stop science building includes a clean room, chemical laboratory, fabrication shop and telescience support center.

Scientists will develop experiments in concept from their laboratories and then use the Microgravity Development Laboratory to build, test, integrate and develop procedures for their experiment hardware.

During flight, researchers will use the Microgravity Development Laboratory's telescience support center, in concert with their home remote site, to control experiment operations and collect experiment data.

Currently being assembled in orbit by Space Shuttle crews, the International Space Station will be an orbiting laboratory built, worked and lived on by 15 cooperating nations. Microgravity experiments aboard the Space Station are currently scheduled to begin in 2000.

More information about NASA's Microgravity Research Program experiments may be found at the following Web site: <http://microgravity.msfc.nasa.gov/>

New pay statement designed to provide employees with more information

Marshall Center employees will receive a new biweekly leave and earning statement beginning with the Jan. 26 pay date.

The new statement, to be used NASA-wide, is designed to provide more information regarding pay deductions and leave balances.

A copy of the new leave and earning form, along with descriptions of the various data fields, may be found on Inside Marshall's Employee Information, Payroll Information at the following Web site:

<http://inside.msfc.nasa.gov/INSIDE/iei.html>

"Safety is the top priority"

Safety slogan submitted by Jimmy Cobb, CR90



NASA photo by Danny Reeves

Safety excellence

Marshall Center Director Art Stephenson, left, greets William Hale, senior consultant for Dupont Safety and Environmental Management Services, Wilmington, Del. Hale led an Executive Leadership Workshop last Wednesday at the Marshall Center. He also briefed the Center's senior management on "Strategies for Safety Excellence" and presented results of Marshall's safety management evaluation.

Sid Saucier named Center's ISO management rep

Marshall Center Director Art Stephenson has appointed Center Associate Director Sid Saucier as Marshall's ISO management representative. Saucier assumes the authority and responsibility for implementation of ISO 9001 standards for the Marshall Center from Robert Schwinghamer, Marshall's associate director, technical, who retired Jan. 3.

Farewell receptions to honor Bob Schwinghamer and Bill Taylor

Bob Schwinghamer, Marshall Center's associate director, technical, will be honored during a farewell reception from 4-6 p.m., Tuesday, Feb. 2, in the Bldg. 4203 cafeteria. Ticket cost is \$7 and may be purchased beginning Thursday from administrative officers or Helen Eddleman at 544-1920. The deadline for purchasing tickets is Jan. 28

A farewell reception honoring Bill Taylor, director of Marshall's Science and Engineering Directorate, will be 4-6 p.m., Thursday, Feb. 4, in the cafeteria of Bldg. 4203. Tickets cost is \$7 and may be purchased from administrative officers or Mildred Wilkerson at 5-1000 from Jan. 16-Feb. 1.

All Marshall employees, on-site contractors and retirees are invited.

Charles Scales to speak at Unity Breakfast Monday

Charles Scales, Marshall's Equal Opportunity Office director, will offer closing remarks at the 14th annual Martin Luther King Jr. Unity Breakfast to be held at 8 a.m. Monday at the Von Braun Center North Hall. The Rev. "Skip" Herman Mason Jr. will speak at the breakfast to be presented by the Delta Theta Lambda Chapter of Alpha Phi Alpha Fraternity Inc. Ticket cost is \$23 and may be purchased from Kim Jones at 544-1365 or Scott Jackson at 544-1304.



NASA photo by Terry Leibold

Space Station Water recycling experiment to fly

In preparation for a May Space Shuttle flight, Don Holder with Marshall's Environmental Control and Life Support Branch of the Thermal and Life Support Division, performs final checkout of the Volatile Removal Assembly Flight (VRA) Experiment. The experiment was shipped last week to the Kennedy Space Center, Fla. Holder is the principal investigator of the VRA Experiment, a critical test of the International Space Station potable water system design.

160 Center employees take Buyout Incentive Plan

Marshall's latest "buyout" or opportunity to receive separation incentives ended Jan. 3, with 160 employees taking advantage of the offer which covered a period that began Aug. 1, 1998.

The buyout offered retirement or separation incentives up to \$25,000 for eligible employees, as part of the Center's goal to bring the Marshall civil service strength down to approximately 2,500 by the year 2000.

Following is a list employees who took the buyout:

AB21 Martin, Roy H, Jr
 AB41 Barron, Virginia A
 AI41 Ray, Jack D
 AI51 Mann, Muse E, Jr
 AL21 Smith, Charlotte D
 AL31 Lovell, Charles W
 AT01 Byler, Elizabeth S
 BC01 Martin, Patricia L
 BF40 Flippo, Brenda F
 BF40 Steele, Bobby G

BJ01 Ellis, Shirley M
 BJ01 Pemberton, Lurie H
 CE01 Westendorf, Ann H
 CO01 Bennett, Mary J
 CO10 Chafin, James D
 CO10 Parr, Geraldine C
 CO10 Payton, Faye S
 CO10 Thomas, Sylvia B
 CO20 Barnett, Dorthy M
 CO20 Conard, Gertrude K
 CO20 Martin, Judy D
 CO20 Thompson, Carol L
 CO30 Lessels, Robert J, Jr
 CO30 Lusk, Dewey L, Jr
 CO30 Rodgers, Elizabeth B
 CO50 Rutledge, Mary J
 CO60 Newby, George E
 CR20 Herda, Donald R
 CR30 Blanteno, James S
 CR75 Powers, Luther B
 CR80 Batson, Norman M
 CR80 Gross, Jack D

See *Buyout Incentive Plan* on page 4

Satellite makes first measurements of storm striking Earth's atmosphere

by Tracy McMahan

As residents of the far North watched a dazzling auroral light display in late September, NASA's Polar space weather satellite made the first measurements to show that solar activity causing the aurora directly affects Earth's outer atmosphere. The Polar observations were reported on Dec. 8 at the American Geo-

physical Union's annual West Coast conference in San Francisco, Calif.

"These observations will help us understand how space storms develop," said Dr. Jim Spann, a scientist at Marshall's Space Sciences Laboratory. Spann is a co-investigator on the Ultraviolet Imager, one of the instruments aboard the Polar spacecraft that measured the affects of the bubble of plasma — electrified gas — that collided with Earth's atmosphere in September.

Ultimately, scientists want to forecast these storms, which can disrupt satellite communications, electric power grid operations and pipeline operations.

"This is the first time we've been able to observe the Sun hurling these roiling bubbles of plasma, see the storm hit Earth's upper atmosphere, and measure

the effects of low-energy oxygen and other gases being blown into space," Spann said.

The Sun ejected the mass of hot, ionized gas Sept. 22, 1998. At its peak from Sept. 24-25, the storm pumped about 200 gigawatts of energy into Earth's atmosphere, causing oxygen and other gases to gush from the atmosphere into space.

"Normal values

for auroral substorms are on the gigawatt levels — emitting enough energy to run a large city for several days," Spann said. "So, 200 gigawatts is a tremendous amount of energy."

As the Polar space weather satellite flew through this fountain of ionized gas, scientists confirmed that the flow of ions was caused when a storm from the Sun smacked into the Earth's atmosphere.

The Polar Ultraviolet Imager used unique filters to take pictures of the

aurora, a ghostly light show that is sometimes visible at night, especially near Earth's polar regions. The brightness of these images can be translated directly into how much energy is being pumped into the ionosphere, the ionized top layer of Earth's atmosphere.

While the Ultraviolet Imager measured this explosion of auroral brightness, another Polar spacecraft instrument, the Thermal Ion Dynamics Experiment, measured the significant increase in oxygen and hydrogen ions blown from Earth's atmosphere. The Thermal Ion Dynamics Experiment principal investigator is Dr. Thomas Moore of the Goddard Space Flight Center in Greenbelt, Md., who was formerly the chief of the Space Plasma Physics Branch at Marshall.

The Polar satellite is one of several geoscience spacecraft launched by NASA and other nations in a coordinated effort to study space weather — geomagnetic substorms and other events — in Earth's space

environment. More information on the Polar spacecraft may be found on the Marshall Center's Space Sciences Laboratory Web site at: <http://www.science.nasa.gov>

"These observations will help us understand how space storms develop."

*Dr. Jim Spann, scientist
Space Sciences Laboratory
at the Marshall Center*

Ultimately, scientists want to forecast these storms, which can disrupt satellite communications, electric power grid operations and pipeline operations.

Marshall to hold public meeting on proposed plans to clean up two Center sites

The Marshall Center will hold a public meeting 6-8 p.m. Thursday, Jan. 21, at the Huntsville-Madison County Public Library to hear comments from residents about Marshall's proposed actions to clean up two sites on the Center.

The sites, located in Marshall's East Test Area, were identified for cleanup during a five-year study conducted as part of the federal Superfund Cleanup Program.

The soil and sediments of the sites contain polychlorinated biphenyls (PCBs), which are organic contaminants. Although officials cannot determine just how the sites were contaminated, they do know that oils containing PCBs were used in the area during World War II for dust and weed control.

At one site, the proposed cleanup of a large pond will entail draining the pond and mixing the top layer of soil with lime. The pond will then be lined with a plastic sheet, a layer of clean soil placed on top and the pond refilled with water.

The fish in the pond will be harvested to protect other animals from ingesting contaminants.

At another site a drainage ditch leading to the pond is proposed for cleanup. A small amount of PCB-contaminated soil and sediments in the ditch will be removed.

A public comment period on the proposed plan for these sites began Monday and will continue through Feb. 9. The public is

See Public Meeting on page 5

Buyout

Continued from page 2

DA01 Schwinghamer, Robert J
DE01 Mick, Bobbye D
DE01 Newton, Alice K
EA01 Key, Carlo F
EA01 Taylor, William E
EA02 Young, Janice M
EB01 Dull, Miriam W
EB11 Butler, Shirley S
EB32 Ball, James A
EB41 Hight, Hermon H
EB41 Settle, Gray L
EB42 Allen, David W
EB44 Barnett, Zack Jr
EB44 Foy, Everett L, Jr
EB51 Jayroe, Robert R, Jr
EB52 Hall, Howard D
EB53 Jones, Brian F
ED01 Holland, Wayne B
ED11 Waites, Henry B
ED12 Fox, Thomas H
ED12 Weisler, August C, Jr
ED13 Dawson, Travis E, Jr
ED13 Hendrix, Neal D
ED13 Phillips, Roy H
ED23 Hays, Philip J
ED24 Havrisik, Donna M
ED24 Lee, Henry M, Iii
ED34 Ramsey, Paul E
ED34 Stephens, Teddy W
ED52 Robinson, Jennifer H
ED62 Franks, Gerald D.
ED62 Patterson, William C
EE22 Salter, Larry D
EE23 Pryor, Donald E
EE25 Gosdin, Dennis R
EE31 Harsh, Marcellus G, Jr
EE41 Smitherman, Daniel M
EE52 Coiner, Warren G
EE52 Self, Timothy A
EE54 Harwell, Rogers J
EH11 Flowers, Doris K
EH12 Nerren, Billy H
EH12 Zwiener, James M
EH22 Belcher, Jewell G, Jr
EH22 Parr, Richard A
EH32 Roberts, Floyd E, Iii
EH33 Broad, Robin Tay
EH33 Weaver, Edwin A
EH42 Darby, Stephania P
EH51 Mclemore, Vicki A
EH52 Campbell, Willa J
EH52 Hollich, Stephen E

EJ31 Barisa, Bartholomew B
EJ32 Loose, Jack D
EJ44 Compton, Eugene T
EL01 Jordan, Sandra Q
EL33 Robinson, Johnny F
EL62 Ralston, William S
EL63 Vadasy, Kenneth
EM41 Laurine, Jerry M
EO01 Clarke, Walton G
EO01 Golden, Harvey
EO01 Herrin, Milton T
EO01 Owen, Clark M
EO21 Stowe, Elizabeth C
EO26 Krome, Kimberly W
EO27 Rogers, Donna D
EP73 Lishman, Sidney H
EP81 Houk, Nancy C
EP92 Hanks, Charles F
EP94 Cornett, Darrel D
ES71 Costes, Nicholas C
ES81 Blackwell, Patricia A
ES84 Parnell, Thomas A
GP20 Cather, John C
GP22 Hipp, Doris W
GP22 Nelson, Virginia P
GP22 Pettis, Margaret R
GP24 Burruss, Hattie M
GP30 Mitchell, Dan C
GP30 Smith, Sadenya W
GP40 Masters, Merlyn M
GP40 Owens, Vicki S
HR01 Greenwood, Lawrence R
HR20 Vaughan, Otha H, Jr
JA01 Marmann, Richard A
JA10 Caddy, Barbara H
JA10 Nunley, Anita S
JA10 Prendergast, Lisa M
JA41 Curtis, Edith C

JA41 Walls, Samuel L
JA51 Hill, Henry C
JA51 Owens, John H, Jr
JA62 Sprinkle, Charles E
JA81 Howard, Shirley S
JA91 Hamby, Paul V, Jr
JA91 Peters, William L
MG10 Adams, Kimberly J
MG10 Whitten, Amy P
MG30 Watkins, Jimmy R
PA01 Parks, Robert W
PA01 Terry, Jennie F
PD01 Swalley, Frank E
PD11 Blevins, Harold R
PD11 Kearns, George B, Jr
PD11 Thompson, James F
PD21 Nishimuta, Ena L
PP04 Whitaker, Olan G
PS01 Harrison, James K
PS01 Huffaker, Charles F
PS01 Rupp, Charles C
RA02 Wright, Belinda M
RA30 Breazeale, William L
SA21 Allfrey, Barbara G
SA24 Thomas, Agnes J
SA34 Eastis, Debra L
SA51 Caddy, Larry A
SA51 Henson, Victor K
TA01 Marshall, Ronald C
TA01 Olivier, Jean R
TA01 Wojtalik, Fred S
TA11 Bellingrath, Albert F,
TA11 Swafford, Judith S
TA21 Lofton, Louie R
TA21 Rankin, Thomas O
TA31 Clark, Egbert E, Jr
TA31 Tjulander, Raymond V
TA61 Rosenthal, Max E

Program Management & Control classes available at the Marshall Center

The Employee and Organizational Development Office will offer several Program Management & Control classes during January, February and March.

Classes will be limited to 30 people and registration is on a first-come first-served basis. No training request form is required. The courses and dates are: Earned Value Management, Jan. 26-28;

Parametric Cost Estimation, Feb. 9-10; Configuration Management, Feb. 23-24; Procurement Process, March 3-4; and PM&C: Tools and Techniques, March 29-April 2. Classes will be held from 8 a.m.-4:30 p.m. in Bldg. 4200, room G-21.

Employees may register via AdminSTAR or contact Stephanie Elliott at 544-7553 or Renee Higgins at 544-8864.

NASA technology assists in detecting natural marine oil seeps

NASA is teaming with industry to identify natural marine oil seeps in the Gulf of Mexico, offering clues on oil deposits. Through the Commercial Remote Sensing Program at the Stennis Space Center, Miss., NASA is demonstrating practical applications of space technologies in America's marketplace. One such partnership is between the Earth Observation Commercial Applications Program (EOCAP) at Stennis and the Earth Satellite Corporation (EarthSat), of Rockville, Md., a company that is using remote sensing technology to help identify the oil seeps in the Gulf of Mexico.

Remote sensing uses sensors mounted on aircraft or satellites to look at the Earth's surface. Information gathered by these sensors can be used to make detailed maps of specific areas around the planet. These maps have many uses, such as roadway planning, disaster assessment, or as in the case of EarthSat, to help identify marine oil seeps.

Oil migrates naturally through cracks from deposits deep below the ocean floor, releasing oil into the world's surface waters. These marine oil seeps offer clues as to where oil deposits may be located in ocean basins. Marine oil seeps occur naturally and are manifest as oil slicks on the ocean's surface.

"Oil seep detection is a market that has not been addressed by

any other EOCAP partnerships," said Mark Mick, EOCAP manager at Stennis. "I also think it is a good application for remote sensing technology."

This NASA/industry partnership uses remote sensing and related technologies to explore markets for NASA Earth sciences-related products that will enhance opportunities for industry customers. Such partnerships can last up to two years. These NASA/industry partnerships help promote the use of products based on remote sensing technologies in markets where such technologies are underutilized or are not used at all. NASA's technical and financial participation helps reduce the market risk associated with new product development to a level that partnering companies can accept. This allows small companies to explore the use of remote sensing without exposure to excessive financial risk.

To detect oil seeps, EarthSat uses radar satellite data from RadarSat International, a joint NASA-Canadian Space Agency mission in Richmond, British Columbia, Canada, and at times from radar data of the European Space Agency and the U.S. Landsat Thematic Mapper.

The commercial remote sensing program at Stennis is funded by the Earth Science enterprise, NASA Headquarters, Washington, D.C. The Office of Earth Science seeks to understand the total Earth system and the effects of natural and human-induced changes on the global environment.

Public Meeting

Continued from page 3

encouraged to submit comments to:

Rosa Kilpatrick

CO50, Government and Community Relations Office
Marshall Space Flight Center
Huntsville, AL 35812

Development of cleanup plans for other sites at Marshall identified in the Superfund study is continuing. The presence of contaminants at the sites is related to their use in space program activity going back to at least the 1960s, when current standards for environmental protection were unheard of.

Additional information is available for public review in the Administrative Record and at these Marshall Center information repositories:

- NASA Public Inquiries Office in Bldg. 4203 at Marshall;
- Redstone Scientific Information Center in Bldg. 4484 on Redstone Arsenal;
- Huntsville-Madison County Public Library, 915 Monroe St., Huntsville;
- Triana Public Library, 280 Zierdt Road, Triana; and
- Madison Branch of the Huntsville-Madison County Public Library, 484 Hughes Road, Madison.

The Superfund Cleanup Program at Marshall is being conducted by the Center's Environmental Engineering and Management Office in cooperation with the U.S. Environmental Protection Agency and the Alabama Department of Environmental Management.

Obituaries

Cook, Warden, 84, Huntsville, died Dec. 5. He retired from Marshall in 1974 where he worked as a chemical engineer. He is survived by his wife, Katherine Cook.

Guttman, Charles, 68, Huntsville, died Dec. 18. He retired from Marshall in 1985 where he worked in technical management. He is survived by his wife, Helga Guttman.

Leinsetter, Emerson, 74, Crossville, died Nov. 11. He retired from Marshall in 1980 where he worked as an electronics technician. He is survived by his wife Betty Leinsetter.

McQueen, Paul, 79, Arab, died Dec. 6. He retired from Marshall in 1975 where he worked as an engineer with experimental facilities and equipment. He is survived by his wife Elizabeth McQueen.

Ray, Julius, 73, Madison, died Dec. 20. He retired from Marshall in 1980 where he worked as an aerospace engineering technician. He is survived by his wife Mary Ray.

Tessemann, Bernhard, 83, Huntsville, died Dec. 27. A member of Wernher von Braun's original team, Tessemann served as assistant director of the Marshall Center's Astronautics Laboratory and retired in 1972.

Tillery, Clarence, 64, Huntsville, died Dec. 25. He retired from Marshall in 1990 where he worked as an aerospace engineer. He is survived by his wife Mary Tillery.

White, William, 78, Huntsville, died Nov. 6. He retired from Marshall in 1985 where he worked as an engineering technician. He is survived by his wife Christine White.

Employee Ads

Miscellaneous

- ★ Kerosene heater, 23,000 BTU, five gallons of kerosene, \$100. 461-7934
- ★ Home theater speakers, Polk, CS250S Center & Sony, flat panel fronts w/stands, \$150 o.b.o. 461-7934
- ★ Toaster oven, white, \$20. 430-3290
- ★ Bio-Dyne bench w/curl bar, olympic barbell, leg extension, \$250 o.b.o.; weights, 255 pounds, \$125. 881-8877
- ★ Kenmore, extra-large capacity washer and dryer, \$100 each o.b.o. 830-1346
- ★ Double desk, beige, \$50. 881-4748
- ★ Cowboy boots, size 10-1/2 D, tan, navy. 851-7406
- ★ Sailboat, 26' w/trailer, \$5,000 firm. 881-1895
- ★ Murray push mower, 20", 3HP, \$45. 721-0617
- ★ Two microwave ovens, \$60 and \$40; washer, \$100; dryer, \$50. 830-4304
- ★ Ping-Pong table, folds up, rolls on casters, \$50. 837-7209
- ★ Atomic ARC Extreme 170 skis w/Tyrolia bindings, Alpine white/purple ski boots, size 5, \$150. 828-5308

Vehicles

- ★ 1996 Hyundai Accent, 2-dr. hatch. 45K miles, white, 5-spd., air, AM/FM/cassette, \$5,400 o.b.o. 883-9227
- ★ 1995 Pontiac Firebird Formula, V-8 LT1 Corvette engine, 6-spd., all power, CD, extra speaker system, payoff. 536-0505
- ★ 1992 Cadillac Sedan DeVille, blue, \$7,200. 586-6413
- ★ 1988 Ford Ranger, 92K miles, 4-cyl., black w/ gold stripe, sport wheels, \$2,200 o.b.o. 430-0145
- ★ 1996 Mazda B-4000 Cab Plus pickup, automatic, power, 29K miles, \$13,800. 880-3354 after 5 p.m.
- ★ 1991 Cadillac DeVille, 63K miles, \$10,900; 1990 Lincoln Continental, 72K miles, \$6,900. 881-3322
- ★ 1990 Plymouth Voyager SE van, 3-dr., blue, 7-passenger, FM/AM cassette, power locks, \$3,000. 881-5237
- ★ 1997 Nissan Maxima SE, 5-spd., all power, Bose CD, \$17,995 o.b.o. 851-2929
- ★ 1989 Firebird Formula, \$4,500. 922-0958

Wanted

- ★ Correspondence from Marshall Center co-workers during 1950s-early 1980. Contact:

Charlie Souther at (706) 379-1566 or write to: 5777 Pine Crest Road, Young Harris, Ga. 30582

- ★ Projection screen, prefer old, torn, stained, or damaged, minimum 60" wide, mechanism must work. 722-0882
- ★ Banjo, 5-string, adult size. 922-1512 ext. 1982 days, 498-5520 evenings

Free

- ★ DayRunner planner, burgundy leather classic size 5.5" x 8.5". 828-7803

Lost

- ★ Straight Jacket Oakley sunglasses, black. 544-1717, pager 551-5865

Center Announcements

- ☛ **Blue Cross/Blue Shield** — A Blue Cross/ Blue Shield federal representative will be at Marshall Center 9-11 a.m. Wednesday in Bldg. 4200, room 324. Employees with questions or claim concerns are encouraged to attend.
- ☛ **Mandatory security briefing** — As a part of an on-going federal workplace security program, the Protective Services Office at the Marshall Center will conduct a series of security awareness and education briefings this month in Morris Auditorium. All Center and on-site contractor personnel are required to attend one of the sessions. Seating will be on a first-come, first-served basis. The one-hour briefing will be given at 8:30, 10 a.m., 1:30 and 3 p.m. Jan. 19, 20, 25 and 26. One briefing is set for 8:30 a.m. today.
- ☛ **Rollout training available** — The Employee and Organizational Development Center at Marshall is offering several NPG 7120.5a Rollout training classes. The course is designed to familiarize program and project personnel with the new NASA Program/Project Management Process and reinforce top-level rollout strategy originally presented Nov. 9 at Marshall. The 12-hour class is limited to 25 and employees may register via AdminSTAR. A training request form is not required. Training dates are Jan. 26-27, 28-29, Mar. 9-10, and 11-12. Contact Stephanie Elliott at 544-7553 or Renee Higgins at 544-8864.
- ☛ **Surplus Auction** — A local Defense Reutilization and Marketing Office sealed bid sale of property will be held Tuesday, Jan. 19, at 7405 Warehouse Road, Redstone Arsenal. Property may be inspected and bids submitted from 8 a.m.-3 p.m. Jan. 13, 14 and 15 in Bldg.

7435, Chestnut Road. Bids may be faxed, mailed or hand-carried. The bid submission deadline is Jan. 19. Contact: Donna Davis at 842-2570 or Elizabeth Couch at 842-9474.

- ☛ **Surplus Auction** — An industrial and commercial surplus auction of equipment for NASA and Boeing will be held at 9 a.m. Saturday, Jan. 16, at Bentley's & Associates, 1025 Jordan Road in Huntsville. Property may be inspected from noon- 5 p.m. Thursday, 8 a.m.-5 p.m. Friday and 7:30-9 a.m. Saturday. For more information, call 859-9031 or download a catalog from the following Web site: www.bentleysauction.com
- ☛ **International Space Station Utilization Conference** — NASA will cosponsor the International Space Station Utilization Conference Feb. 1-4 in Albuquerque, N.M. More than 20 sessions will cover the major areas to be explored on the Space Station including biotechnology, biomedicine, gravitational biology, materials science, fluids and combustion research, space science, Earth science and engineering research. Commercial research and service activities also will be discussed. More information may be found at the following Web site: <http://www-chne.edu/isnps>.
- ☛ **MARS Ballroom Dance Club** — The MARS Ballroom Dance Club will offer Mambo and Waltz lessons 7-8 p.m. Jan. 18 and 25. Classes will be held in the Parish Hall of St. Stephen's Episcopal Church at 8020 Whitesburg Drive. These lessons are available to MARS Ballroom Dance Club Members and partners/guests at \$6 per person. Contact: Pat Sage at 544-5427.
- ☛ **NASA Alumni League Dinner** — A NASA Alumni League Dinner will be held Thursday, Jan. 21 at the Holiday Inn-Madison Square. The speaker will be Marshall Center Director Art Stephenson. A social will begin at 6:30 p.m., followed by dinner at 7:30 p.m. Ticket cost is \$16 and payable by check to: **NASA Alumni League/MSFC Chapter**, c/o Ed Buckbee, 811 Esslinger Road, Huntsville, AL 35802. Contact: Ed Buckbee at 881-9622.
- ☛ **NASA Alumni League Membership** — NASA Alumni League memberships for 1999 may be renewed by contacting Alumni Membership Chairman Norm Schlemmer at 881-2938. Membership dues are \$30 and may be mailed to: 8911 Louis Drive, Huntsville, AL 35802.
- ☛ **Toastmasters** — The NASA Lunar Nooners Toastmasters Club will meet at 11:30 a.m., Tuesday, Jan. 19 in the Bldg. 4610 cafeteria conference room. All Marshall employees, contractors and friends are invited. Contact: Lee Johns, 544-5241
- ☛ **Safety shoe van** — The mobile safety shoe van will be at the southwest end of Bldg. 4471 from 8 a.m.-2 p.m. today. Assistance with safety shoe needs will be available for Center civil service and contractor personnel.

MARSHALL STAR

Marshall Space Flight Center, Alabama 35812
(256) 544-0030

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Director of Internal Relations
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Managing Editor — Angela D. Storey
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