



Columbia Set to Bring Home 'Good Science' of MSL-1



Alabama Senator Jeff Sessions spoke to the orbiting Space Shuttle Columbia crew Monday while visiting the Marshall Center. He offered his support and best wishes for the mission's continued success.

As the Space Shuttle Columbia crew and the first Microgravity Science Laboratory (MSL) team approached the finish line of their 16-day run of conducting science in space, crew members worked steadily to finish planned investigations and, in some cases, gather bonus data for investigators.

In a news conference from space early Tuesday morning, Payload Commander Dr. Janice Voss summarized the purpose and success of the experiments being conducted aboard Spacelab in the Marshall-managed MSL-1 effort. "The nature of research in general is an evolutionary process, building on what has come before and feeding what comes after," said Voss. "This is true with the experiments on this flight. They're all contributing good science to the future of these research programs."

In another press conference, but from the ground on Monday, Mission Manager Teresa Vanhooser of Marshall only needed to say a few words to sum up how the mission had progressed.

"All orbiter, Spacelab and payload systems are performing superbly," said Vanhooser. "We are very pleased to have been able to take full advantage of this reflight opportunity."

Mission Scientist Dr. Michael Robinson expanded on that theme, noting that "There has been an impressive display of cooperation between the science teams and the Marshall Center cadre supporting this mission to make it all possible. Now it's time to get down to the task of analyzing the data, which should

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Center Personnel Changes Announced

Center Director Wayne Little's last week announced the following personnel changes at the Marshall Center pending formal approval by NASA Headquarters.

Camillo (Charlie) Arcilesi, deputy director of the Program Development Directorate, has been appointed deputy manager of the Flight Projects Office. He came to Marshall in February from NASA Headquarters.

Armis (Len) Worlund, chief engineer of the Reusable Launch Vehicle Projects, has been appointed chief engineer for Space Shuttle Main Engine Projects, Space Transportation Systems Chief Engineers in the Science and Engineering Directorate.

Harry Craft, manager of the Technology Transfer Office, has been appointed assistant director of the Science and Engineering Directorate.



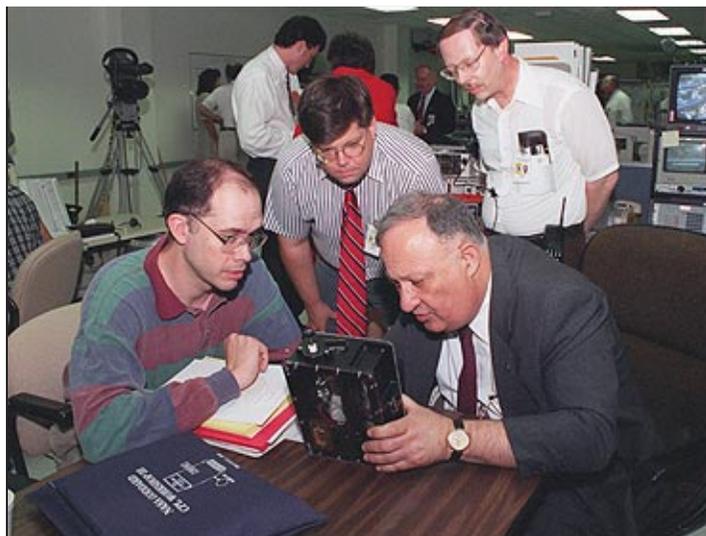
Charlie Arcilesi



Len Worlund



Harry Craft



Dr. Arnould Nicogossian (sitting right), associate administrator for NASA's Office of Life and Microgravity Sciences and Applications, is briefed by John Caruso of Lewis Research Center on the Coarsening in Solid-Liquid Mixtures experiment. Observing are Joel Kearns (center), manager of the Microgravity Research Program Office at Marshall and Dr. Don Reiss of Marshall's Space Sciences Laboratory.

MSL-1 Mission's Results Have Science Teams Happy, Tired

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keep everyone busy for some time. The science teams are happy and exhausted," Robinson said.

Alabama Sen. Jeff Sessions visited Marshall's Spacelab Mission Operations Control Center on Monday. He spoke to Columbia crew members, offering his support and best wishes for the mission's continued success. "All of America is proud of the good work you are doing," said Sessions. "This is the beginning of a commercially feasible adventure into space exploration, characteristic of this nation — a nation of explorers."

Early this week, as the mission passed the 12-day mark for time in orbit, the list of scientific highlights was already lengthy.

The total number of fires, or combustion experiment runs conducted, was at 196 and counting, compared to 144 which had been scheduled in the premission plan.



Astronaut Dr. Cady Coleman discusses MSL-1's Physics of Hard Spheres Experiment with Project Scientist Jerri Ling during a visit to Marshall last week.

Jackson Named to Manage Office in Microgravity Research Programs

Robert Jackson has been appointed manager of the Microgravity Science and Applications Projects Office in the Microgravity Research Programs Office. He will oversee the microgravity science and applications projects in the areas of microgravity materials science, microgravity bitechnology and the glovebox flight activities.



Robert Jackson

Jackson, former manager for Space Station Operations and Utilization in the Flight Projects Office, joined the Marshall Center in 1962 as an aerospace engineer in the former Aero-Astroynamics Laboratory.

An investigation of soot phenomena resulted in discovery of a new mechanism of flame extinction caused by radiation from soot. The flames emit soot sooner than expected. The results have direct impact on spacecraft fire safety and the theories predicting the formation of soot, which is a major factor as a pollutant and in the spread of unwanted fires.

A study of spherical flame structures, or flame balls, resulted in achieving the weakest flames ever burned either in space or on the ground, science team members said. The tests will provide new data for models of weak combustion processes, a prerequisite for developing cleaner, more fuel-efficient internal combustion engines.

Experiments using a unique levitating furnace facility known as TEMPUS yielded the first measurements of specific heat and thermal expansion of glass-forming metallic alloys which have never been done on Earth. These are fundamental measurements necessary for modeling industrial materials systems needed to manufacture new and better products.

Studies conducted in the multipurpose Middeck Glovebox have demonstrated its value in supporting a variety of experiments in microgravity, including those on this mission in the areas of liquid and bubble behavior, fluids-based heat transfer devices, and solid-liquid mixtures. As testimony to the glovebox's usefulness, the crew has performed well over 100 tests runs in the facility — more than doubling the number planned.

Another indicator of the intensity of operations supporting the on-orbit science is the fact that the MSL-1 mission had racked up some 27,000 computer commands sent from the ground, compared to a previous record of 25,500.

Columbia is scheduled to land at Kennedy Space Center at 5:47 a.m. (CDT) Thursday.



Marshall Center Director Wayne Little and his wife Bebe (right) are pictured with President Bill Clinton in the Oval Office following the presentation of the Presidential Rank Award for Distinguished Service this spring. Other NASA honorees were from left, Sharon Foster and her husband Mike (Goddard), Al Diaz and his wife Angela (NASA HQ) and Dr. Kristin Hessenuis (Langley).

Marshall Employees Honored During Awards Ceremonies

Awards were presented last week at the annual Marshall Center honors ceremonies recognizing civil service and contractor employees who have made exceptional contributions to the Center's mission and the nation's space program.

The honorees were recognized by Stephen Oswald, deputy associate administrator for the Space Shuttle, from NASA Headquarters, Marshall Center Director Wayne Littles and Deputy Center Director Carolyn Griner.

Awards presented included the NASA Outstanding Leadership Medal, the NASA Exceptional Scientific Achievement Medal, the NASA Exceptional Engineering Achievement Medal, the NASA Public Service Medal, NASA Exceptional Service Medal, NASA

Exceptional Achievement Medal, the NASA Equal Employment Opportunity Medal, NASA Public Service Medal, NASA Group Achievement Award, Certificate of Appreciation, Marshall Director's Commendation Certificate, Marshall Group Achievement Award, Technology Transfer Award, Research and Technology Award, Marshall Patent Award and Marshall Inventor of the Year recognition.

Receiving special recognition were Marshall's Associate Director (Technical) Robert Schwinghamer and CBS television correspondent Walter Cronkite, who received medals last month at NASA Headquarters. Schwinghamer received the NASA Distinguished Service Medal and Cronkite the Agency's Distinguished Public Service Medal.

NASA Distinguished Service Medal



Robert Schwinghamer, DA01

NASA Distinguished Public Service Medal



Walter Cronkite

NASA Outstanding Leadership Medal



Richard Helmick, AI01



Victor Henson, SA51



Richard Marmann, JA01



Charles Henke, GP01
Retired

NASA Exceptional Engineering Achievement Medal



Thomas Kester, EB52



Grady S. Jobe, AA01

"You represent the best of an excellent workforce here at the Marshall Center."

— *Wayne Littles*

NASA Exceptional Service Medal



Dominic Amatore, CA01



Deborah Bowerman, AI01



Melvin Carruth, EH11

Photos were not available for several award recipients. NASA Exceptional Engineering Achievement Medal: David Lehner (EB52). NASA Exceptional Achievement Medal: John Carlstrom of the University of Chicago and Marshall Joy (ES84). NASA Exceptional Service Medal: Lott Brantley (PS01), Daniel Carter (ES01 resigned), Charles DeWeese, (EH32 retired), Neal Hendrix (ED13) and Olan Whitaker (PP01).



Sheila Cloud, BR01



John Keidel, EL72



Teresa Smith, GP40



Helen Stinson, LA40

NASA Exceptional Achievement Medal



Stephen Cash, EE54



Alan Clark, CR85



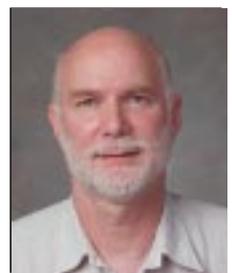
Barbara Cobb, EO02



Rose Cramer, EO02



*Victoria Crawford,
CM41*



John Crisler, EL72



Paul Gilbert, JA21



Henry Hill, FA61



Danny Johnston, EL71



Joe Leopard, EP01



*Paulette Lovingood,
DA01*



Jose Matienzo, EJ11



Stephen Newton, EJ43



Neil Otte, ED24



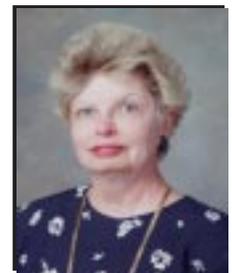
Patrick Rogers, ED24



Richard Siler, EL73



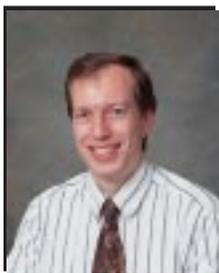
Kenneth Walker, BF41



Judy Werner, CO01

Photos were not available for NASA Exceptional Achievement Medal recipients Fred Bickley (EE31), Samuel Clark (EH23); Daniel Dumbacher (XX01); Phyllis Olinger (CC01); Deborah Stephens (CR90); and Barbara Turner (FA01).

MSFC Research and Technology Award



John Anderson, ED73



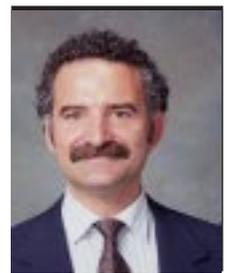
Kevin Baker, EP33



Paul Bookout, ED23



Julian Bynum, EH22



Peter Curreri, ES75



Kim Whitson, GP40



Timothy Driskill, ED73



Miria Finckenor, EH12



Jeffrey Finckenor, ED52



John Forbes, EP33



Donald Ford, ED52



Charles Griffith, ED52

Research and Technology Award



William Jones, ED52



Anthony Kelley, EB23



Matthew Marsh, EP32



William McMahon,
EH33



Mitchell Mendrek,
EH24



David Noever, ES76



Darron Rice, EP33



Michael Spurrier, ED24



Ching-Hua Su, ES75



Michael Tinker, ED23



Jason Vaughn, EH12



Dale Watring, ES71

Technology Transfer Award



David Brown, EH13



Andrew Hodge, EH32



Carl Lester, EH33

Photos were not available for MSFC Research and Technology Award recipients Robert Carrigan (ED52 posthumously); Kathy Chandler (ED73); Darrell Englehaupt (UAH); Marshall Joy (ES84); Rachel Kamenetzky (EH12); Kirby Lawless (EH23); Patrick Rogers (ED24); and Bruce Weddendorf (ED53).



Douglas Westra, ED62



Charles Wilkerson, EH13

MSFC Patent Awards



Jay Perry, ED62



Deborah Schmidt, EH23



Joseph Bell, EB54



Thomas Bryan, EB44



Michael Book, EB44



Richard Howard, EB44



Frank Zimmerman,
EH23

Photos were not available for Technology Transfer Award recipients Majid Babai (EH33); Gregory Jerman (EH22); Clyde Jones (EH23); Matthew Marsh (EP32); William Myers (EP33); and Billy Nerren (EH12).



Michael Shadoan, EP33



Robert Sisk, ES92



Palmer Peters, ES75



Martin Johnson, EB22

NASA Equal Employment Opportunity Medal

James C. Rice, Jr. CE01 (Posthumously)

NASA Public Service Medal

Lawrence J. DeLucas Univ of Ala/Birmingham
 Paul Smith United Space Alliance
 George T. Marsh Lockheed Martin Corp.

NASA Group Achievement Award

- *Advanced Automated Directional Solidification Furnace Team
- *Aft Skirt Modification Team
- *Bursting Pulsar Analysis Team
- *Hubble Space Telescope Neutral Buoyancy Facility Test Team
- *Hydrochlorofluorocarbon-14lb Blown Foam Qualification Team
- *Integrated Propulsion Technology Demonstrator Team
- *Microgravity USML-2 Glovebox Team
- *Mir Middeck Glovebox Team
- *Multipurpose Hydrogen Test Bed Thermal Control Test Team
- *STS-78 RSRM Field Joint Insulation Performance Investigation Team
- *Third United States Microgravity Payload Team
- *X-ray Source Systems Development Team

MSFC Group Achievement Awards

- *Zero-Base Review Team
- *Mechanics of Granular Materials Team

NASA Inventor of the Year

Darron C. Rice EP33
 Kevin J. Baker EP33
 John C. Forbes EP33
 Michael D. Shadoan EP33
 William N. Myers EP33

NASA Certificates of Appreciation

Alford, George Thiokol/SA
 Allen, Rosalie W. FA22
 Allen, Peter W. AB01
 Anderson, Sherwood JA21
 Austin, Robert E. XX01
 Baugher, Charles R., II ES75
 Best, Joel B. EO66
 Boudreaux, Mark E. JA21
 Bush, Herbert T. ED34
 Catrett, Shawna L. EL62
 Chapman, John S. SA41
 Cockrell, David W. LA02
 Cooper, Mary S. DA01
 Crumbly, Christopher M. JA21
 Curreri, Peter A. ES75/FA
 Daugherty, Richard A. EJ43/JA
 Dickerson, Thomas D. PD31
 Downey, James P. ES75
 Frazier, John L. JA71
 Fundum, Patricia D. GP40
 Gerrish, Harold P. EP01

Gerry, Mark D. PD21
 Gillies, Donald C. ES75
 Goldman, Arthur E. EE25
 Gresham, John W. AB01
 Guynes, Buddy V. FA25
 Hall, Gerald E. FA25
 Hanson, John M. ED13
 Henke, Charles E. GP01
 Hilbert, Doris R. Retired/JA)
 Hoffman, Robert J. EL62
 Holmes, Richard A. EJ71/FA
 Ibrahim, Kimball Y. JA21
 Johnson, Annie L. EO27
 Johnson, Jimmie E. JA21
 Johnston, David L. EL63/FA
 Kegley, Jeffrey R. EL72
 Key, C. Frank EH01
 Key, John E. SA48
 Lehoczsky, Sandor L. ES01/FA
 Lusk, Joe L. EE31
 Lusk, Dewey L., Jr. LA10
 Luttrell, Terry M. AI01
 Lyles, Garry M. DA01
 McBrayer, Robert O. JA71
 Mercier, David R. PD31
 Metts, Linder L., Jr. SA01
 Nein, Max E. PS01
 Pacey, Peter BE/JA
 Phillips, Thomas A. FA21
 Pitt, Jerome K. EL63
 Poole, Kenneth W. BD01
 Posey, Emil L. GP40
 Powers, James R. EL63
 Price, Lois S. SA71
 Reeves, Fredrick A. FA21
 Renfro, Ronald B. EH23
 Richards, James S. PF02
 Robbins, Steaven D. JA71
 Rutledge, William S. SAIC/PA
 Seitz, Paul F. Rocketdyne/SA
 Shannon, Barbara M. SA51
 Shelby, Jerry EJ71/FA
 Simpson, William H., Jr. BD01
 Six, Norman F. DS01
 Smelser, Jerry W. SA31
 Smith, Deon F. AB31
 Soutullo, Becky C. JA71
 Stover, Calvin C. AI01
 Taylor, Phillip USBI/SA
 Tygielski, Philip J. EP43
 Wargo, Michael J. Hdqs/FA
 Wiegmann, Sharon M. EL22
 Wynne, Bertha L. SA71

- *Utilization and Mission Support Source Evaluation Board
- *USBI Transition Team/SA
- *Lease vs. Buy Review Team
- *Travel Office Team
- *GHCC Cost Review Team
- *CoF Team
- *XRFC Team
- *IFMP Team
- *X-33 Business Panel
- *Tether Proposal Team
- *1995 Research and Technology Report Team
- *Convergent Spray Technology Applications Project Team
- *1996 Small Business Innovation Research Team
- *Life and Microgravity Spacelab Mission Team
- *Tethered Satellite System Reflight Team
- *Solar Thermal Upper Stage Technology Demonstrator Team
- *Solar X-ray Imager Mirror Fabrication Group
- *X-ray Calibration Facility Rehearsal Mirror Team
- *Next Generation Space Telescope Optical Telescope Assembly Concept Dev. Team
- *High Gradient Furnace with Quench Thermal Team
- *Space Station Furnace Facility Thermal/Environmental Control Analysis Team
- *Environmental Control and Life Support Systems Facility Test Team
- *Operations Execution Assistant Development Team
- *ATLAS IIAR Propulsion System Testing Proposal Team

Young, Ronald L. SA24

MSFC Director's Commendation Certificates

Bauer, Larry A. EO27
 Bedford, John D. EH52
 Brunson, John W. EL22
 Clark, Tony L. EL23
 Davenport, Ronald W. LA20
 Dinges, Linda L. SA45
 Farley, Benny B. LA10
 Hale, Kenneth B. EL72
 Hall, Ricky A. EP53
 Holder, Donald W. Jr. ED62
 Holt, Kimberly A. EP22
 Housley, John A. SA45
 Hutchens, Cindy F. ED62
 Lechner, Larry E. LA10
 Lee, Cynthia H. EP52
 Luong, Van ED63
 MacLeod, Todd C. EL62
 Maxwell, Theresa G. EO47
 McDougal, John M. EJ33
 McNeal, Curtis I. XX01
 Melton, Tina L. EO02
 Morelan, Jeannie B. SA41
 Nebrig, John R. AB31
 Newton, Kimberly D. GP50
 O'Neil, Daniel A. PS05
 Ogle, Kathryn Y. ED62
 Parisa, Roger K. AB41
 Popejoy, Larry R. Jr. EH52
 Posey, Linda B. SA71
 Prince, Frank A. PP03
 Rainwater, Neil E. II EL22
 Reaves, John H. EJ44
 Russell, Carolyn K. EH23
 Sharp, John R. ED63
 Smith, Dennis E. XX01
 Stucker, Mark L. PS04
 Vu, Toan T. EJ43
 Watson, Lisa A. EO39
 White, Ronald E. PP04
 Williams, Ricky A. CR55
 Zimmerman, Frank R. EH23

MSFC Patent Awards



Michael Polites, EB21



Dean Alhorn, EB23

Photos were not available for MSFC Patent Award recipients Darron Rice (EP33); Kevin Baker (EP33); John Forbes (EP33); William Myers, (EP33); Dale Watring (ES75); and Daniel Carter (Resigned).

MSFC Certificates of Appreciation

Alexander, Leslie, Jr. EP43
 Allcorn, E. Diane MSI/LA
 Allen, Tim H. TBE/JA
 Anderson, Bobby W. TBE/JA
 Arnold, Ralph R. EL24
 Barnett, George W., II EL63
 Blanks, Hal USBI/SA

Bowen, Gregory T.	Rockwell/SA	Holt, James B.	EP42	Nagy, Mickie N.	TBE/JA
Breithaupt, Barbara S.	EP43	Houston, Vance L.	PS05	Newsom, Brent A.	Intergraph
Burruss, Glenda H.	EL22	Howard, Anita B.	EB23	Nguyen, Dalton D.	ED63
Burt, Richard K.	SA52	Howard, James W., Jr.	CSC/EL	Nix, Michael B.	PS03
Butler, Thomas P.	MDA/JA	Huie, Marianne F.	PP04	Owen, Clark T.	EO26
Carrasquillo, Robyn L.	ED62	Hundley, Nedra H.	EE31	Pabon-Medina, Norman	EL62
Cauthen, Philip A.	EO66	Hunt, Samuel W., II	AJT/AA	Philips, Alan D.	PD21
Champion, Robert H.	EP42	Johnston, David L.	EL63	Prendergast, Maurice J.	ED63
Chiou, Jason C.	EP43	Jones, William G.	EL24	Sanchez, Jose G.	EL62
Clark, Dallas W., II	ED63	Jordan, Kathy E.	Tec-Masters/LA	Serocki, Stephanie A.	EO47
Connell, W. K.	TBE/JA	Kauffman, William J., Jr.	EL23	Sisk, Amelia M.	SA45
Cooper, Robert W.	EL73	Lawson, Elizabeth K.	SA01	Skinner, F. Jeanette	EO47
Copeland, David Scott	TBE/JA	Leath, Deborah S.	EP43	Spanyer, Karen L.	ED25
Cunneen, David B.	TBE/JA	Lee, Henry M., III	ED25	Terry, Michael K.	EH23
Davis, Susan W.	EO46	Linton, Robert C.	EL72	Thompson, Karole G.	TBE/JA
Emrich, William J., Jr.	PS05	Lochmaier, Geoffrey D.	EO46	Tucker, Stephen P.	EP42
Estes, Mark L.	TBE/JA	Lucas, C. D.	TBE/JA	Vaccaro, Mark V.	EP43
Farris, Lynn L.	EO26	Lukens, Scott W.	Sverdrup	Vanhook, Michael E.	PP03
Fikes, John C.	PD11	Luz, Paul L.	PD21	Venuto, Charlie	USB/SA
Geurkink, Donald G.	TBE/JA	Matisak, Brian P.	TBE/JA	Vlasse, Marcus	ES76
Gibson, John C.	EP43	McClard, Steven	EL24	Webster, Charles F.	USB/SA
Guffin, Orville T.	PS02	McGougan, Christopher	EH23	West, John R.	LA02
Haas, David	Rocketdyne	McMahon, A. P.	TBE/JA	White, James E.	NASA/EL
Hajos, Gregory A.	PD21	McRight, Patrick S.	EP42	White, John K.	SA39
Hartley, David E.	Lockheed-Martin	Moye, Ralph A.	EE31	Zimmerman, Curtis J.	PD31
Hill, Nancy L.	EL22	Muery, Kimberly G.	EO47	Zollar, Herbert J.	EL72

Submit IDEAS Via Intranet

Do you believe you have a good idea? Is there an alternative to the formal suggestion program? What's the best way to submit your idea?

Innovative Dynamic Employee Active Solutions (IDEAS) is available through Inside Marshall (<http://www.msfc.nasa.gov/inside>) to both civil service and contractor personnel. Click the IDEAS button and complete the form. Your name and organization are optional if you prefer to remain anonymous. Your idea will immediately be sent via e-mail to the Employee Committee. The committee will coordinate your idea with appropriate organization(s) or personnel to get your idea implemented or determine the need for further evaluation. Concurrently, you can conveniently monitor the status of your idea by clicking the "View Recent Ideas" button on Inside Marshall.

Go for it—don't let your ideas linger—you can make a difference!

Technical Library Has Improved Services for Center Personnel

The NASA Scientific and Technical Information (STI) Program has improved its services for NASA and contractor personnel.

NASA employees and contractors can now search online more than 400,000 citations of NASA's library holdings from one or all of the 13 NASA libraries. The new system, called NASA GALAXIE, will allow users to search for monographs, books, journals, and the early aviation collection contained in the National Advisory Committee on Aeronautics (NACA) file.

Personnel also have expanded access to open journal literature through the STI Database, called RECONplus, which contains bibliographic records covering world-wide open journal literature, reports, contracts, specifications, and documents that relate to NASA's strategic enterprises and missions.

Information about Marshall Center access to NASA GALAXIE or RECONplus is available on the Marshall Technical Library home page (URL <http://library.msfc.nasa.gov/library/>).

The NASA STI Program identifies, publishes, archives, and disseminates NASA's scientific and technical information in addition to providing a database of more than 3.5 million publications pertinent to NASA's strategic missions.

For more information contact the Marshall Technical Library at 544-4524 or 4525.

Building 4200 Roof Being Replaced

A roof replacement project for Building 4200 that began Thursday is expected to be completed in October. Parking and personnel entrances on the north side of the building will be restricted as that area is used for equipment and materials. Removal of existing roofing materials will be performed daily from 11 p.m. to 7 a.m.; roof installation will be daily from 6 a.m. to 5 p.m.

Opportunity for Center Director's Discretionary Fund Now Available

The Announcement of Opportunity for the fiscal year 1998 Center Director's Discretionary Fund (CDDF) program has been issued centerwide. Open to all Marshall employees, the CDDF program fosters innovative research and technology for the purpose of building in-house expertise and for the development of new programs at Marshall. Proposals for the 1998 CDDF program are due August 4. Information including "Guidelines and Procedures" for proposing proposals can be found at the CDDF Website at http://infinity.msfc.nasa.gov/Public/CDDF/CDDF_home.html. For more information contact Alan Adams at 4-3607.

Employee Ads

Miscellaneous

- ★ Handmade oriental wool rug 8' x 10', blue, cream and terra-cotta, "serapi" \$795. 881-5756
- ★ NordicTrack skier (Challenger model) \$200 neg. 882-1466
- ★ Minnkota Turbopro electric trolling motor, autopilot, 42 lbs. thrust, less than 20 hours \$400. 922-1169
- ★ Brass and iron queen size bed. 880-9025
- ★ Cooktop GE oversized with grill insert \$150. 882-0546
- ★ Kitchen Aid gas clothes dryer, extra capacity, almond \$150. 464-6423
- ★ 17 ft. boat (Sunbird w/walkthru windshield) Evinrude 88 hp motor and trailer \$3,500 o.b.o. Call after 4 p.m. 859-6475
- ★ GE heavy duty washer and dryer \$250; Refrigerator, copper \$125; table and chairs \$50. 828-2466
- ★ Toshiba T3300SL lap-top computer, 80MD hard disk drive, 1.44 floppy disk with case \$250. 233-1742
- ★ Shih-tzu puppies brindle and white \$200/males; \$250/females; maltese puppies \$350/females. 753-2278
- ★ Round oak table with one leaf, formica top, four curved back oak chairs \$200. 859-5624
- ★ Guitar amplifier, Fender champion 110 \$150. 971-0571
- ★ Ladies Giant Farrago bicycle, 18 speed, purple, quick release hubs and seat post \$150. 882-1566
- ★ 500 new brick "old style" \$100 or \$150 delivered. 864-0155
- ★ Hotpoint window a/c, 18,000 BTU, 220V, 17 1/2"HX, 26"WX, 28"D, used 2 seasons \$200 o.b.o. 536-8414
- ★ Sleeper sofa, textured fabric, pastel colors \$100. 355-2161
- ★ 1978 Wellcraft ski boat, good project for restoring drive-on trailer. Best offer. 837-4136
- ★ Williamsburg blue and white sofa (3 cushion), chair, and love seat, two years old \$800. 353-0049
- ★ Beanie Babies, new styles \$15; current \$12. Would like to trade Splash for Flash. 881-9419
- ★ Wood dining room table with 6 chairs \$60. 650-0919
- ★ Blue gray tint carpet, 1600 square feet. 464-3639
- ★ Glass and brass dining room table with four chairs \$175. 830-8422
- ★ Light for formal dining room, polished brass and ceramic \$60. 882-6449
- ★ Slant front oak desk, locks, antique \$250; antique

oak lamp table \$150 o.b.o. 539-8899
★ 1991 Dynasty Elan 17', 3.0L I/O, trailer, suncover, skis, misc. access, always kept in dry storage \$7,500. 881-6297

Vehicles

- ★ 1997 Mercury Tracer LS 4-door ABS, air, automatic, 12K miles \$10,900. 883-2757
- ★ Mazda RX7 Coupe, 57K miles, sunroof, security, alloys, dealer serviced. 881-0645
- ★ 1994 Ford Ranger Supercab, air/stereo/cass., custom camper shell, 38K miles, NADA \$11,200, sell for \$9,950. 881-6297
- ★ 1996 Coleman pop-up camper. A/C, stove, 2-way refridge, sleeps 6 \$4,800. 650-2173
- ★ 22 ft Winnebago MH, new diesel, refrigerator, interior, CD; microwave, generator, TV, VCR, awning \$12,900. 461-8721
- ★ 1994 Honda Accord EX, automatic, new tires, sunroof, 94K miles \$11,500. 350-1011
- ★ 1991 Mazda Miata, a/c, security system; 1996 Saturn SC2, keyless remote entry, sunroof, pwr, options \$14,000. 498-0629
- ★ 1991 Mercury Topaz, 67K miles, a/c, automatic \$4,200 o.b.o. 880-9271
- ★ 1985 Honda Accord 3-door, 5-speed, a/c, 200K miles \$750 o.b.o. 233-4892

Center Announcements

- ☛ **MARS** — The Mars Golf Club championship tournament will be held August 2 at Point Mallard. The tournament will be a one day event and the first tee time begins at 7:30 a.m. Entry deadline is July 25. For more information contact Robert Rutherford at 4-8117
- ☛ **Toastmasters** — Redstone Toastmasters International will meet every Tuesday at 6 p.m. in the Morrison's Cafeteria in Madison Square Mall. For more information call 461-0476.
- ☛ **Blood Drive** — The American Red Cross will be at Bldg. 4752 on July 18 until 1:30 p.m. for the monthly Marshall Blood Drive visit.
- ☛ **Entertainment** — The ABSTRACT Band will be performing 'Jazz and Blues' on July 21 from 6:30 p.m. to 8 p.m. downtown in Big Spring Park. This event is free to the public every Monday during the summer until Labor Day. Bring your lawn chairs and picnic baskets.
- ☛ **NASA Exchange** — The NASA exchange, through an agreement with Executive Tour and Travel Services, Inc., is offering 4 days/3nights in the Disney/Epcot area for MSFC employees, retirees, on-site contractors, and their families. For more detailed information call Executive Tour and Travel at 1-800-272-4707 or flyers are available in the Exchange Office, Bldg. 4752. The NASA Exchange reference account number is ER11583-002.

Job Opportunities

- CPP 97-68-JB, Contract Price/Cost Analyst, GS-1102-13**, Procurement Office, Planning Analysis and Review Division. Closes July 18.
- CPP 97-71-DC, AST, Liquid Propulsion Systems, GS-861-14**, S&E, Space Transportation System Chief Engineers, Space Shuttle Main Engine, Requirements & Integration. Closes July 18.
- CPP 97-79-JB, Property Disposal Officer, GS-1104-12**, Human Resources & Admin Support Office, Management Operations Office, Property Management Division. Closes July 18.
- CPP 97-63-CL, AST, Structural Materials, GS-806-14**, S&E, M&P Lab, Project & Env. Engr. Div. Closes July 18.
- CPP 97-64-CL, AST, Experimental Manufacturing Techniques, GS-861-14**, S&E, M&P Lab, Fabrication Services Div. Closes July 18.
- CPP 97-61-TH, AST, Aerospace Flight Systems, GS-861-14**, S&E, Sys Analysis & Integration Lab, Sys Engr Div. Closes July 18.
- CPP 97-74-SH, AST, Mission Operations Integration, GS-801-14**, S&E, Mission Operations Lab, Operations Integrations Office. Closes July 18.
- CPP 97-75-SH, AST, Mission Support Requirements & Development, GS-801-14**, S&E, Mission Operations Lab, Mission Systems Div. Closes July 18.
- CPP 97-76-DC, AST, Navigation, Guidance and Control Systems, GS-861-14**, S&E, Astrionics Lab, Instrumentation & Control Div. Closes July 25.
- CPP 97-77-DC, AST, Optical Physics, GS-1310-14**, S&E, Astrionics Lab, Optics & Radio Frequency Div. Closes July 25.
- CPP 97-78-CP, AST, Aerospace Flight Systems, GS-861-14**, S&E, Space Systems Chief Engineers, Microgravity Experiment Project Engr. Closes July 25.
- CPP 97-62-CL, AST, Structural Materials, GS-806-14**, S&E, M&P Lab., Proj Engr. & Envir. Engr. Div. Closes July 25.
- CPP 97-69-CL, Lead Production Controller, GS-1152-12**, S&E, Mat. & Processes Lab., Fab. Services Div. Closes July 18.
- CPP 97-81-JB, Traffic Management Specialist, GS-2130-5/7 (Potential GS-9)**, Human Resources & Admin Support Ofc., Management Operations Ofc, Transportation Mgmt Div. Closes July 25.
- CPP 97-35-PL, Staffing Assistant, GS-203-6**, Human Resources & Admin Support Ofc, Personnel Ofc, Personnel Mgmt Div. Closes July 21.

MARSHALL STAR

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