



## New Organizations Created in Center Realignment

A revised charter has been approved for the Marshall Center and marks a major milestone, according to Center Director Dr. Wayne Littles, toward accomplishing new center roles and responsibilities.

The most visible change embodied in the new charter is a realignment that includes the creation of four new organizations reporting to the Center Director. They are:

- The Space Transportation Programs Office, RA01, which is responsible for all space transportation programs and projects assigned to Marshall except for Space Shuttle. The program managers for Advanced Space Transportation Program (ASTP), X-33 Program and X-34 Program are administratively assigned to the organization but report, under the Lead Center responsibility, directly to the Center Director;
- The Microgravity Research Program Office, MG01, responsible for management of microgravity research and

capabilities development Agencywide;

- The Flight Projects Office, JA01, which combines the previous Payload Projects Office, the Science and Applications Projects Office, and the Assistant to the Director for Space Station; and
- The Global Hydrology Research Office, HR01, which is responsible for projects management, hydrology research and management of the Global Hydrology Research Center.

Managers of the four organizations are Frederick D. Bachtel, Space Transportation; Joel Kearns, Microgravity; Richard

Marmann, Flight Projects; and Lawrence R. Greenwood, Global Hydrology.

Littles announced the changes in a letter to all employees. He emphasized that the realignment enables the center to become "more focused and responsive to our customers."

In addition, it will "greatly enhance the Center's capability to manage these key assignments," he said, referring to Marshall's new missions as NASA's lead center for Space Transportation Systems and Microgravity Research, as well as a Center of Excellence in Propulsion.

## X-34 Systems Design Freeze Completed

Government and industry managers have successfully completed a three-day systems design freeze of X-34, the next technology demonstrator vehicle in NASA's Reusable Launch Vehicle stable.

X-34, a reusable, suborbital, air-launched vehicle, will fly at speeds

approaching Mach 8 (eight times the speed of sound) at altitudes up to 50 miles to continue demonstrations of new, reusable launch vehicle technologies aimed, ultimately, at dramatically reducing the cost of transporting payloads into space.

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## Marshall's Dahm to Receive the AIAA Aerodynamics Award



Werner Dahm

Dr. Werner Dahm, chief aerodynamicist for the Marshall Center, will receive the American Institute of Aeronautics and Astronautics (AIAA) Aerodynamics Award.

The award is presented for meritorious achievement in the field of applied aerodynamics, recognizing notable contributions in the development, application and evaluation of aerodynamic concepts and methods.

Dahm will receive the award during the awards luncheon of the AIAA 15th Applied Aerodynamics Conference on June 24 in Atlanta, Ga.

Dahm, whose professional career spans over 50 years, began his NASA career with Marshall in 1960 where he has worked on

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Oakwood College President Dr. Delbert Baker is greeted by Center Director Dr. Wayne Littles during a visit to the Center Friday. Baker met with Littles, Deputy Director Carolyn Griner and Charles Scales, deputy director of Marshall's Equal Opportunity Office. Photo by Emmett Given

# Open House Visitors Send 'Thank You's' for Jobs Well Done

The Marshall Center Open House on May 3 resulted in numerous positive comments from those who attended. Some attendees were sufficiently impressed that they wrote letters detailing their experiences at the event. Following are excerpts from two letters received by the Center.

*Cooper L. Morris of Conyers, Ga.,* came with the Sunday School Class of First United Methodist Church in Conyers. He wrote, "...The tours, the exhibits, and the people we met were marvelous. The people responsible for the open house deserve several pats on the back for a mission superbly accomplished. It did not matter if we were the first visitors to their venue or lab or visitor number 9853+. Each and everyone in every lab and at every Center building took the time to answer our questions and explain what they did and how they accomplished their task, as if we were the only visitors attending the open house.

With all the mementos and information the members of my Sunday School Class and I left the Center with, three things clearly come to the forefront of our visit:

A sense of pride in the individual and the corporate efforts carried on (and achieved) by the Center which can come only from a sincere caring and belief in the work and the ultimate mission;

Dedication to the work and excitement about the mission of the Center was exhibited by each and every person with whom

we talked and came in contact; and the work, the research and the mission carried on by Marshall must, without debate, continue. The benefits of the work, the research and the mission are far too valuable a combined resource not only for our generation; but, a legacy for future generations upon which to build.

We left the center with an assurance that the entire space program and the mission Marshall has been assigned is in excellent hands.

Thank you for opening your house to us and allowing us the privilege of previewing coming events in space and on our home planet."

*John and Patricia Pelton of Manchester, Tenn.,* were likewise favorably impressed. They wrote, "We would like to thank you and your coworkers for the opportunity to tour the Marshall Space Flight Center on May 3, 1997. There are two areas we found most striking: (1) the many interesting areas of work being carried out at Marshall, and (2) the wonderful reception we received from the NASA employees. The employees' desire to explain their work (in an understandable fashion) and to take the time needed to educate the lay person was appreciated. ...Once again, thanks to all of the employees who participated in the open house. Also, do not wait thirty years for the next one."

## Spencer Appointed to Climate Studies Post



*Roy Spencer*

**D**r. Roy Spencer has been appointed to the Senior Scientific and Technical position of Senior Scientist for Climate Studies, Space Sciences Laboratory, in the Science and

Engineering Directorate.

Spencer, who joined the Marshall Center as a Space Scientist in 1987, is NASA's authority on atmospheric measurements and climate studies and leads the development of theoretical, analytical and observational techniques for the measurement of specific climate processes from space-based sensors. He has attained national and international recognition for his work in developing the first techniques for monitoring global warming.



*The Marshall Center and USBI Co. bring space technology down to where "the rubber meets the road." Technicians applied a non-skid surface on the Mobile, Ala., Bankhead Tunnel on May 21. The new road resurfacing spray system, which could help highway workers complete resurfacing projects in a fraction of the time it now takes, uses the same technology that applies heat resistant coatings on the Space Shuttle's Solid Rocket Boosters. The joint venture between Marshall and USBI is part of a program to pass on space technology to businesses and industry.*

*Photo by Dennis Keim*

# Review at Orbital Sciences Corp. Anchors Design of X-34 Systems

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The review, conducted at Orbital Sciences Corporation in Dulles, Va., essentially anchors the design of X-34 systems — for example, structures, guidance, navigation and control, avionics, thermal protection systems and main propulsion systems — that will allow the program to proceed with fabrication and manufacturing of these systems. Initial flights, scheduled for launch and landing within air space at the White Sands Missile Range, N.M., will begin in late 1998. Up to 25 flights within a year's time are scheduled; some also will take place in Florida to demonstrate subsonic landing and thermal protection system performance through inclement weather conditions. X-34 bridges the gap between earlier subsonic Clipper Graham (DC-XA) flights in 1996, and the larger and higher performance X-33 Mach 15

demonstrator, which will begin flights in early 1999.

The winged, reusable, single-stage X-34 vehicle — propelled by a kerosene/liquid oxygen engine developed, tested and provided by NASA — will demonstrate key technologies, including composite primary and secondary airframe structures; cryogenic insulation and propulsion system elements; advanced thermal protection systems and materials; low cost avionics, including differential Global Positioning and Inertial Navigation Systems; as well as key operations technologies such as integrated vehicle health-monitoring and automated checkout systems.

The X-34 program is managed by the Marshall Center. Five other NASA Centers, Department of Defense



X-34 Reusable Launch Vehicle artist's concept.

installations (White Sands Missile Range and Holloman Air Force Base) and an industry team led by the prime contractor, Orbital Sciences Corporation, are playing key roles in the development and eventual flight testing of the X-34 technology testbed demonstrator.

## Conference Here Highlights Advances in Mechanisms

Having a conference at which a keynote address focuses on failure investigation — the how and why of things going wrong — might sound a bit like the gathering was preoccupied with a negative outlook.

That was definitely not the case at the Aerospace Mechanisms Symposium held earlier this month in Huntsville and hosted by Marshall Center, although featured speaker Bob Ryan did zero in on the benefits of understanding failure analysis.

The three-day symposium actually covered a range of topics, including instrument mechanisms, bearings and tribology, low shock mechanisms, and the Tethered Satellite Mission failure investigation.

The annual symposium is held here only every eighth year, so when it does come to Huntsville, it provides a unique opportunity for Marshall personnel to hear first hand about new developments in their fields.

Ryan, a longtime Marshall employee who retired last year, emphasized in his address that engineers involved in complex projects may as well accept that the inevitability of problems. By understanding the most productive methods for failure analysis, he said, even those involved in the design stages of a project will be better able to deal with pitfalls when they do occur.

The symposium drew approximately 200 attendees, from NASA centers, the European Space Agency and a wide array of U.S. and international companies. Twenty-seven technical papers were presented.



Jim Pruitt (left), director of the Education Programs Office at Marshall, presents a photograph of the Space Shuttle Discovery on the launch pad to Discovery Middle School Principal Jackie Pedigo. Discovery Middle School, established one year ago, will display the photograph in the front hall of the school.

Photo by Emmett Given

## Dahm to Receive Award

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the aero and aerothermodynamic design of the Saturn I block II, Saturn IB, Saturn V and later the Space Shuttle Space Transportation System. In 1992, he was appointed to his current position as chief aerodynamicist.

## Employee Ads

### Miscellaneous

- ★ Altec Lansing speakers 15 inch woofers, horns, crossover, cabinets \$375. 883-2653
- ★ Factory chrome wheels for Nissan pickup 6-lug, air dam; various parts for 78 280Z, make offer. 882-1566
- ★ Sega Genesis with 3 games; Sonic I, Sonic II and Carmen Sandiego \$100 o.b.o 882-6124
- ★ Membership at Little Mountain Marina on Guntersville Lake, cabins, fishing, boating, price reduced. 881-0645
- ★ Large antique mahogany veneer desk \$300. 883-2689
- ★ Baby beds, high chairs, car seats. 536-6719
- ★ Lawn mower 3.5HP Briggs and Stratton Sprint engine, push mower, never been used \$150. 518-9802
- ★ 1996 Pleasure Way motor home wide body, air, microwave, TV/VCR, bath, hitch, 9800 miles, \$38,000. 881-9404
- ★ Assorted maternity clothes \$5 to \$20 each. 880-1606
- ★ VITO alto saxophone. Best offer \$200 or over. Perfect for school band. 895-9348
- ★ Sega CD, 32 bit, 7 games \$150 o.b.o. 883-4896
- ★ Hooked on Phonics, complete package \$210. 883-5886
- ★ 1997 Nitro 160, 75 Mercury, never used, trailer included, call for rigging details \$14,500 o.b.o
- ★ Small campertop \$75; Infant: swing \$30; jumping jack \$10; car seat \$25; tub/ring \$10. 880-1606
- ★ Delta single handle kitchen faucet with spray and soap dispenser, model 400 D WF \$59. 883-8257
- ★ Solid wood frame couch and loveseat, reupholstered hunter green and burgundy stripe \$150 o.b.o. 837-9717
- ★ Boat, 75HP motor, trailer \$900. 883-8947

### Vehicles

- ★ 1995 Chrysler Concorde, 12K miles, spruce color, split wholesale, retail. 883-7348

### Vehicles

- ★ 1987 Honda Accord DX 5-speed \$3,500 o.b.o. 205-230-6321
- ★ 1988 Maxima, 91,800 miles \$5,395. 205-586-8664
- ★ 1987 Ford Aerostar, 7 passenger, retail \$4,725; wholesale \$3,500; asking \$3,200. 205-586-3061
- ★ 1995 Explorer, teal, Eddie Bauer, leather, power, 27K miles \$24,900 or best offer. 851-8188

### Wanted

- ★ Twin beds. 536-6719

### Lost

- ★ Man's prescription sunglasses left at the MSFC softball field in the dugout following May 22 game. If found, please contact Frank Bynum, 355-1730 or Gail Ralls, 4-3268.

## Center Announcements

- ☛ **MARS**— The MARS Scuba club is offering a beginning Scuba class. Classes begin in June and will run for three weeks. The class is open to all Marshall employees and on-site contractors. Contact J. Patterson, 4-6023.
- ☛ **Dry Cleaning**—The laundry/dry cleaning and shoe repair drop-off service, located in the basement of building 4200, room G-37, will change its hours of operation effective June 2. The new hours will be 7:30 a.m. to 4:30 p.m.
- ☛ **MARS**—The MARS Golf Club tournament is scheduled for June 7 at Joe Wheeler. The format will be 2-man best ball and is open to all Marshall employees and retirees. The tournament will be flighted by handicaps and you select your partner. Entries due date is 12 noon May 30 and entry fee is \$4. Green fees will be paid at the course. Entry contacts are Lee Foster (4-1589), Joel Bishop (4-3808) and Roger Harwell (4-2684). For more information call Phil McKinnon, 4-0579.
- ☛ **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.

- ☛ **NCMA**—The Huntsville Chapter of the National Contract Management Association and the U.S. Army Corps of Engineers will host a seminar entitled "Acquisition Reform 1996" on May 28 from 8 a.m. to 4:30 p.m. at the Tom Beville Center located on Sparkman Drive. The guest speakers will be Donna Ireton and Kenneth Martin. Registration forms are available from John Fletcher at 880-5744. The cost is \$95 for NCMA members and \$145 for non-members. Lunch will be provided. Information on membership is available from Peggy Gunter at 881-0544.

## Job Opportunities

- CPP 97-32-TH, AST, Aerospace Flight Systems**, GS-861-14, S&E, Systems Analysis & Integration Laboratory, Systems Engineering Division, Systems Requirement & Verification Branch. Closes June 4.
- CPP 97-40-CV, AST, Technical Resources Management**, GS-14, Microgravity Research Program Office, Program Planning and Control Office. Closes June 4.
- CPP 97-44-SH, Supv AST, Flight Systems Test**, GS-15, S&E, Propulsion Laboratory, Propulsion Test Division. Closes June 3.
- CPP 97-48-CV, Management Support Assistant (OA)**, GS-303-07 (potential to GS-08), Office of the Associate Director. Closes May 29.
- CPP 97-49-CV, Management Assistant (OA)**, GS-344-07 (potential to GS-08) Office of the Director. Closes June 4.

### URGENT PLEA

*Teresa Smith of Marshall's Procurement Office was diagnosed with Chronic Myelogenous Leukemia in February. She is seeking a donor, as are many other patients who are in need of a bone marrow transplant. Anyone interested in participating in the Bone Marrow Drive, June 24, should contact Jean Weisser, Blood/Marrow Drive Coordinator, at Redstone Arsenal. For more information or an appointment please call 842-0400.*

# MARSHALL STAR

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