

NASA Briefs

Astronomers see black hole feeding

Astronomers have obtained an unprecedented look at the nearest example of galactic cannibalism—a massive black hole hidden at the center of a nearby giant galaxy that is feeding on a smaller galaxy in a spectacular collision. Such fireworks were common in the early universe, as galaxies formed and evolved, but are rare today. Although the cause-and-effect relationships are not yet clear, the views provided by complementary images from two instruments aboard NASA's Hubble Space Telescope are giving astronomers new insights into the powerful forces being exerted in this complex maelstrom. Researchers believe these forces may even have shifted the axis of the massive black hole from its expected orientation.

Aerogel test may work for spacecraft

A new concept for spacecraft tiles also can be used on Earth to make efficient, vacuum-like insulation for refrigerators, furnaces and automobile catalytic converters. The new material is similar to that used for the tiles on the space shuttle to protect the vehicle from the heat generated during re-entry into Earth's atmosphere. However, the new tiles have a layer of aerogel, or "solid smoke," mixed into the tile's air spaces. Aerogel is made of silica, alumina and carbon and other materials, and can weigh less than the same volume of air. The fibers that form the tiles are mostly a mixture of silica and alumina oxides. The aerogel space-tile material could be used in commercial products that require mechanically tough super-insulation, such as catalytic converters for cars or specialty refrigeration units. In addition, the new material could be used for furnaces; liquefied gas transport trucks; or liquid carbon dioxide, nitrogen and oxygen containers.

First lady, Goldin connect with France

Using the Internet, First Lady Hillary Rodham Clinton and students at the Ecole Nationale de Chimie, Physique et Biologie in Paris recently talked to NASA Administrator Daniel S. Goldin and students at Kramer Middle School in Washington, D.C. Students shared groundwater and vegetation data collected using the CERES satellite and lead each other on tours of their respective cities. NASA and the French space agency are forging an international educational program that capitalizes on the excitement of space exploration.

JSC becomes first ISO-9001 NASA center

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Three internal audits and center-wide ISO 9001 training were conducted that fall. NQA first audited JSC in November 1997, and identified only one major non-conforming area. The NQA reviewed the JSC corrective action processes in February when the center successfully passed all audit requirements. As part of ISO 9001 certification, the NQA will audit the JSC Quality System in the future to ensure continued compliance and management improvements.

While many industrial companies seek ISO certification to meet business or customer demands, JSC expects the quality process to increase effective use of its resources, said Lee Norbraten, director of JSC's ISO 9000 Office.

Open season begins for Thrift Savings Plan

"Open season" for the Thrift Savings Plan began May 15 and will continue through July 31, allowing eligible employees to join, add to their retirement investments or change the allotments to the various funds.

During the period, employees will be able to begin contributing to the Thrift Savings Plan, change the amount of their contributions, changing the allocation of their contributions among the C, F, or G investment funds, or stop their current contributions.

The investment choices that

employees make during open season will apply to all new contributions, including contributions made through payroll deduction; agency automatic 1 percent contribution for Federal Employee Retirement System employees; and the agency matching contribution for FERS employees. FERS employees not making contributions, may still elect to invest all or part of their agency automatic 1 percent contribution in any of the investment funds.

Employees may sign up, make changes, or stop contributions by completing a TSP election form and

returning to AH6/ Employee Services; accessing the Employee Express web site through the Human Resources Home Page <http://hro.jsc.nasa.gov/>; or calling Employee Express at 1-800-571-3453.

Only one change per open season is permitted and it must be done by July 31. The effective date for an election or change to an election depends upon when changes are submitted.

Changes received May 15-July 4 will be effective July 5; changes received July 5-July 18 will be effective July 19; and changes received

July 19-July 31 will be effective Aug. 2.

Employees who wish to move previous TSP investments between the C, F, or G funds, don't have to wait for an open season. They may move funds 12 times each year either by mailing a TSP-30 form to the Thrift Board or by calling the 24 hour-a-day TSP "ThriftLine" directly at 504-255-8777. Those who call to make changes will need their TSP personal identification number.

For additional information, visit Employee Services in Bldg. 45, Rm. 140, or call x32681.



JSC PHOTO BY STEVE CANDLER
CINCO DE MAYO—Claudia Pena and Jose Sada perform a dance titled "La Negra" during a performance by the Mixteco Ballet Folklorico at the Bldg. 3 cafeteria during JSC's Cinco de Mayo Celebration. The dance is from the State of Jalisco, Mexico. Sada is the founder of the Houston-based dance troupe.

Seafood success leads to additional cafeteria pilots

Kabobs, stirfry, spinach fettuccini to be joined by specialty dessert selections

The success of Tuesday specials such as chicken and shrimp kabobs in JSC's Bldg. 3 cafeteria has prompted the JSC Exchange to continue the pilot indefinitely in Bldg. 3.

In addition to continuing the Tuesday Specials that were test marketed, the cafeterias will be giving away a gas grill to a lucky patron on July 1, and begin test marketing premium desserts in June.

"I'm delighted that the Tuesday Specials Pilot will be extended indefinitely in Building 3," said Harry Conran, the JSC cafeteria manager. "Based on the last six weeks of sales, we clearly have three seafood winners: chicken and shrimp kabobs, the JSC stirfry, and the seafood combo on spinach fettuccini."

"The Exchange management team appreciates the center's support to our new initiatives," added Karl Schuler, JSC Exchange Operations Manager. "In response,

I asked the cafeterias for their ideas about a summer give-away that would spark our patrons' interest. So we're going to give away a gas grill as a thank you."

During the month of June, customers will receive a ticket with the purchase of the lunch special or an equal or greater amount at the Bldg. 3 and 11 cafeterias. Customers will put their names on the tickets and drop them "in a hat." A name will be drawn on June 30, and the grill will be given away on July 1—just in time for the Fourth of July weekend with a couple of days to spare for assembly.

In addition to the gas grill give-away, the cafeterias are investigating the possibility of offering premium desserts. "Currently we're looking for a couple of leading candidates that will have broad appeal," Conran said, "such as a nice New York cheese cake and perhaps a carrot cake. We'll also be experimenting with other new entrees in the near future as well."

National quality awards go to two JSC contractors

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Services Corp., Lanham, Md., both received the award in the large business, service category. ILC Dover, Inc., Frederica, Del., received the award in the large business, product category. In the small business, product category BST Systems Inc., Plainfield, Conn., received the award; and Advanced Technology Co., Pasadena, Calif., received the award in the small business, service category.

Dyncorp supports JSC's fleet of 45 aircraft, which fly more than 14,000 hours a year in support of NASA activities. In its nomination, JSC reported that the contractor was responsible for cost avoidance savings of \$21 million, 49,000 flights without incident, seven con-

secutive award fee "excellent ratings," 182 consecutive months without a union grievance, a one-third reduction in aircraft spares costs and a 99.98 percent mission effectiveness in its operation of the T-38 astronaut training aircraft fleet.

"DynCorp brought a new spirit of teamwork to our aircraft operations," said Flight Crew Operations Director Dave Leestma. "We work well together and have a common goal—the safe and efficient operation of our aircraft fleet. They have done a superb job and are well-deserving of the George M. Low award."

ILC received its honors both for its work in supporting human space walks, and for its recent success in the development and delivery of

the Mars Pathfinder airbag landing system.

"ILC's commitment to quality is evident every time we perform a successful space walk," said JSC Engineering Director Leonard Nicholson. "The fact that we expect to complete the same amount of space-walking time in the next five years as we have throughout the entire U.S. space flight history to date reflects our confidence in quality-conscious suppliers such as ILC."

Allied Signal Technical Services Corp. demonstrated exemplary operational proficiency of over 99.996 percent from 1995 through 1997 with 99.94 percent systems reliability covering the same time frame.

"Each of these companies has

definitely made a positive impact on NASA's performance goals," said Frederick Gregory, associate administrator for Safety and mission assurance at NASA Headquarters.

BST achieves consistently outstanding performance in a field often characterized as "black magic"—aerospace batteries. BST developed the battery for the Mars Pathfinder. The battery lasted more than three times the planned Mars surface-mission duration, 98 Martian days versus the required 30 days.

Advanced Technology Co. is considered a world-class metal joining company, tackling jobs that most organizations consider impossible. The company has produced 20 imaging detectors that are operating error-free in space.

Two companies earn top small contractor award

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Integration Support to the International Space Station. Barrios is responsible for developing and sustaining an electronic information system to provide ISS users with access to technical and management program data. Tasks included database development, applications development, systems operations and technical planning.

Barrios employs 300 people providing information technology, space operations, training, and configuration/change management services to NASA, the Department of Defense, and the contractor community, as well as the commercial sector.

Johnson Engineering Corp. was selected for the company's outstanding effort in providing Flight Crew Systems support to multiple pro-

grams, including the Space Shuttle Program and the Space Station Program.

The Johnson Engineering prime contract includes design, development, and fabrication of mockups and trainers used for astronaut training in the Mockup and Integration Laboratory at JSC and in the Neutral Buoyancy Laboratory at the Sonny Carter Training Facility. Other Johnson Engineering responsibilities include facility operations and sustaining engineering in the MAIL and the NBL; the development and provisioning of flight crew equipment; crew station stowage design and payload integration, human systems engineering; and configuration management support.

Johnson Engineering has been a JSC contractor since 1974, starting

with a habitability study for Skylab, which led to involvement and support for stowage design and payload integration on every manned mission since the first flight of the shuttle in 1978.

The Government Procurement Connection has evolved into a collaborative effort between local, state, and federal government entities. This unique event marks an exciting new day in inter-governmental cooperation and information accessibility regarding government contracting opportunities. Guests speakers at the luncheon included Houston Mayor Lee Brown, Master of Ceremonies Bill Balleza, News Anchor from Channel 2, and keynote speaker Dr. Julian Earls, Lewis Research Center deputy director for operations.



The Roundup is an official publication of the National Aeronautics and Space Administration, Lyndon B. Johnson Space Center, Houston, Texas, and is published every other Friday by the Public Affairs Office for all space center employees. Deadline for the submission of articles is Friday, three weeks before the desired date of publication.

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