

## NASA Briefs

### Shuttle research leading to diabetes breakthroughs

Diabetic patients may someday reduce their insulin injections and lead more normal lives because of new insights gained through innovative space research in which the largest insulin crystals ever studied were grown on the space shuttle. Results from a 1994 insulin crystal growth experiment in space are leading to a new understanding of diabetes. "The space-grown insulin crystals have provided us new, never-before-seen information," said Dr. G. David Smith, scientist at Hauptman-Woodward Medical Research Institute, Buffalo, N.Y. Because of the increase in crystal size, Smith's team is able to study in more detail the delicate balance of the insulin molecule. With some of the new and unexpected findings, researchers may be able to improve how insulin is released from its stored state to its active state. This could greatly improve the quality-of-life of people on insulin therapy by cutting down on the number of injections they need.

### SeaWinds instrument ready for installation

A major milestone has been reached in NASA's development of "faster, better, cheaper" space missions with the delivery of the SeaWinds instrument, NASA's next generation El Niño monitoring device to Ball Aerospace in Boulder, Colo., for integration into the Quick Scatterometer satellite. SeaWinds is a specialized microwave radar that measures both the speed and direction of winds near the ocean surface. Winds directly affect the turbulent exchanges of heat, moisture and greenhouse gases between the atmosphere and the ocean. Changes in the winds along the equator play a key role in the formation of the El Niño phenomenon. SeaWinds will use a rotating dish antenna and radiate microwaves across 90 percent of the Earth's ice-free oceans every day. The instrument will collect wind speed and wind direction data in a continuous 1,118-mile-wide band, making 400,000 measurements daily.

### SOHO coronagraph sees comets hit Sun

In a rare celestial spectacle, two comets have been seen plunging into the Sun's atmosphere in close succession, on June 1 and 2. This unusual event on Earth's own star was followed on June 2 by a likely unrelated but also dramatic ejection of solar gas and magnetic fields on the southwest limb of the Sun. The observations of the comets and the large erupting prominence were made by the LASCO coronagraph on the Solar and Heliospheric Observatory spacecraft. Images are on the Internet at [http://umbra.nascom.nasa.gov/comets/SOHO\\_sun-grazers.html](http://umbra.nascom.nasa.gov/comets/SOHO_sun-grazers.html)

# University of Houston, JSC start incubator

(Continued from Page 1) the commercial market, helping develop business plans and locating venture capital, without which many start-up companies could not succeed," Davis said.

The university brings two distinct strengths vital to promoting small business use of NASA advanced technologies: top scientists to develop technologies for private sec-

tor use and a renown business faculty to help target commercialization opportunities.

UH researchers along with NASA and private sector experts will first review NASA technologies to identify those that match faculty expertise and have market potential. Then UH faculty will submit proposals to develop and refine the technologies for commercial use. As UH faculty

members develop a space technology, the search begins for businesses that may be interested in partnering with UH to commercialize the technology. Because building the business around a technology often becomes the most difficult part of commercialization, the UH College of Business Administration's Small Business Development Center and Center for Entrepreneurship

and Innovation helps the company form a business plan and assists with marketing and financing required for implementation.

A recent study by the National Business Incubation Association estimated that every dollar invested in an incubator returns nearly five dollars to the local economy, particularly in diversifying the industrial base.



JSC Photo S98-08108 by Steve Candler

**TEA TIME—NASA Astronaut Soichi Noguchi bows graciously as NASA JSC Equal Opportunity Specialist Jessie Hendrick drinks tea during a Japanese tea ceremony. The ceremony was part of the recent JSC Asian Pacific American Heritage Month in the Bldg. 3 cafeteria. Ryoko Shimizu, center, president of the Japanese Student Association at the University of Houston-Clear Lake, and Isako Tamari performed the ceremony. Tamari has been an approved tea instructor for the Ura Senke school in Japan for more than 35 years.**

## Space Center Houston opens Mars attraction

Mars, the mysterious fourth planet from the Sun, has captivated the American psyche for decades, and now Space Center Houston is inviting the public to be among the first to experience a thrilling voyage to another world.

This summer, Space Center Houston is hosting Southwestern Bell's "Race to the Red Planet," an interactive vision of the first human mission to Mars. The high-energy virtual reality and interactive exhibits will be open through Labor Day.

In the exciting, hands-on exhibit, visitors will experience the many elements involved in mission training, discovery how the body, mind and spacecraft are affected in the long journey through space, and be the first Earthlings to set foot onto the surface of the Red Planet.

The mission to Mars begins at the Space Port, where visitors are "transported" through an airlock chamber to the crew briefing site. All preliminary information about the mission to Mars is revealed, including the reasons Mars is an important destination. In the Space Port, visitors will select crew members and finalize details of the six-month journey, conduct training exercises and get launch information through hands-on experiments, computer interaction, and video and sound recordings.

Upon completion of training, the new crew members enter a second airlock and depart Earth aboard a Mars Transfer Vehicle. The visiting crew will learn how to keep their physical strength and counter the effects of zero gravity. They'll also prepare for repairs in the event of damage and help map out the landing site.

Visitors next will pass through a landing airlock, and step onto the surface of "Mars," where a surface habitat that arrived before the crew left Earth will provide interactive displays for experimenting with everything from geology to the possibility of life on Mars. The habitat will allow visitors to explore differences between Mars and Earth in terms of weather patterns, constellations, gravity changes and communications. They'll also be able to strap into a space pod and at 300 miles an hour race against time, the elements and each other.

Badged JSC civil service and contractor employees may visit Space Center Houston for free. Normal admission is \$12.95 for adults, \$11.95 for seniors and \$8.95 for children 4-11. Children under 4 are admitted free.

## JSC workers in 1998 astronaut class

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Gregory C. Johnson; Gregory H. Johnson (Maj., USAF); Stanley G. Love, Ph.D.; Leland D. Melvin; Barbara R. Morgan; William A. Oefelein (Lt., USN); John D. Olivias, Ph.D., Nicholas J.M. Patrick, Ph.D.; Alan G. Poindexter (Lt. Cmdr., USN); Garrett E. Reisman, Ph.D.; Steven R. Swanson; Douglas H. Wheelock (Maj., USA); Sunita L. Williams (Lt. Cmdr., USN); Neil W. Woodward III (Lt., USN); and George D. Zamka (Maj., USMC).

Anderson is the manager of JSC's Emergency Operations Center. Chamitoff is a United Space Alliance flight controller. Creamer and Wheelock are space operations

officers for the Army Space Command. Fossum is an X-38 flight test engineer. Hilliard is a medical officer. Greg C. Johnson is a research pilot and chief of the Maintenance and Engineering Branch. Swanson is an aerospace engineer.

Following a period of training and evaluation, the astronauts will receive technical assignments within the Astronaut Office before receiving a space flight assignment.

A complete list of the candidates and their biographical data can be found on the Internet at the following URL:

<ftp://ftp.hq.nasa.gov/pub/pao/press-rel/1998/98-097a.txt>

## Flags allow employees to display their heritage

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Aldersgate Praise and others. During the week, employee exhibits and displays will be needed for exhibition in the Bldg. 3 cafeteria. The exhibits/displays will depict employees' skills and interests in the following categories: art work (painting, sculpting, modeling); needlework (quilting, embroidering, needlepoint, dress making); hobbies (collecting, crafting, woodworking, genealogy); and in honor of NASA's 40th Anniversary, there will be a NASA memorabilia day.

Both civil servants and contractor employees are welcome to participate. Interested exhibitors should contact Jessie Hendrick at x31203.

American Heritage Week, once again, will give employees' children an opportunity to show their artistic talents through coloring. Entries should be related to an American Heritage theme. Children ages 2-15 are eligible to submit one entry per child. A token of appreciation will be sent to each child's parent. The colored entries will be displayed in the lobby of Bldg. 1

July 6-9, and at the Gilruth July 10. Entry forms have been distributed around the center, and also may be picked up from Paula Scheffman, Mail Code AJ, Bldg. 1, Room 172. All entries must be on the official entry form and be returned to Scheffman no later than June 30. Ribbons will be awarded to the winning entries.

What's your heritage? Last year, several companies and individuals purchased international flags that are permanently displayed in Teague Auditorium and are identified as a

donation from the company or individual that purchased them. This year, JSC hopes to expand the collection to include all of the cultures of Team NASA. The goal is for the flags to completely represent the work force. Flags cost \$56 each (including a flag stand) and order forms are available from Pat Burke at x30606.

Additional details regarding American Heritage Week will be provided through the Equal Opportunity Programs Office via the Internet at <http://www4.jsc.nasa.gov/EPO>

## Open season on retirement swaps

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if they're unsure which retirement system they're under.

JSC is providing several sources of information and assistance to help employee make the best possible FERS transfer decision. The Human Resources home page provides the most current, comprehensive source of information on transferring to FERS. The new web pages include the latest version of the FERS Transfer Handbook, transfer forms, comparison software, schedules, answers to frequently asked questions, and links to the Office of Personnel Management and Social Security web sites.

JSC will sponsor two training sessions each month from July through December. Each four-

hour session will focus on helping employees make an informed decision on whether to transfer. The class schedule is posted on the web site. No sign-up is required, but seating will be on a first-come, first-served basis.

OPM is providing computer software for employees to use in comparing their CSRS and FERS benefits. The easy-to-use software allows employees to input different variables, dates, and scenarios and review the resulting impacts under both CSRS and FERS. The software is available for downloading from the Human Resources home page.

Employee Services Representatives are available to provide assistance and individual counseling. Just call x32681 for an appointment.

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Editor ..... Kelly Humphries

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