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SPACE CENTER Roundup

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JSC photo S98-20489 by Mark Sowa

Team completes assembly of X-38 fuselage

The fuselage of one of the X-38 vehicles, a spacecraft called V-201, has been constructed.

V-201 will be the first spacecraft ever built at the Johnson Space Center. The spacecraft is a full-scale prototype of the Crew Return Vehicle (CRV), which will serve as the permanently attached lifeboat or ambulance for the space station.

An integrated team of JSC engineers, Lockheed support contractors, and European Space Agency engineers from seven different countries designed the fuselage at JSC. The lead design engineers were Wayne Jermstad for the cabin, Tony Dao for the aft end, Chris Lupo for the fins, and Tammy Long for the skin panels. Karen Edelstein led the structural

verification team. Chris Madden and Ken Wong were the team leads for the design of the overall structure.

As the designs of the parts were completed, Dave Young took the lead in manufacturing and assembly. Larry Zielke oversaw the manufacturing and procurement of the structural components. Steve Peterschmidt and Dave Wade designed the assembly plans and the fixtures that hold the structure together during assembly. Dan Petersen engineered and led the aft end assembly.

As the components for the fuselage arrived, the assembly team, led by Keith Day and Mike Adkins, assembled them into a vehicle. Technicians Dave Kroen, Scott Lee, and Fred Winter,

machinist Joe Ruiz, and Quality Assurance support Shane Miller have been assembling the vehicle structure for the past 18 months. Frank Jenson and Kevin Rau have used a state-of-the-art laser tracking system to inspect, position, and align the structure during assembly.

V-201 is currently scheduled for a full CRV mission (on orbit to landing) space flight test on board the space shuttle in late 2000. The interior volume of the spacecraft is 420 cubic feet, larger than any other human spacecraft other than the orbiter, Skylab, Mir and the International Space Station.

The operational CRV will be able to carry all seven astronauts from the space station in the event of an

The X-38 Structure Design and Manufacturing Team has completed assembly of the fuselage of a full-scale prototype of the Crew Return Vehicle for the International Space Station.

emergency. A synopsis of the Request for Proposals for the operational CRV was released in December. A draft RFP is scheduled for release in February, with

a goal of contract award for the first part of the CRV development by October 1, 1999.

The flights of the X-38 atmospheric flight test vehicles, V-131 and V-132, are scheduled for February 5 and 26, respectively, at the Dryden Flight Research Facility in California. ■



TransHab achieves key milestone.

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Space walks highlight STS-88 mission.

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Got the squeeze... call the 33333's.

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TransHab passes critical test

JSC's Engineering Directorate successfully demonstrated the deployment and inflation of an inflatable spacecraft known as TransHab by testing the full-scale TransHab test article on December 21, 1998, in JSC's Space Simulation Chamber A.

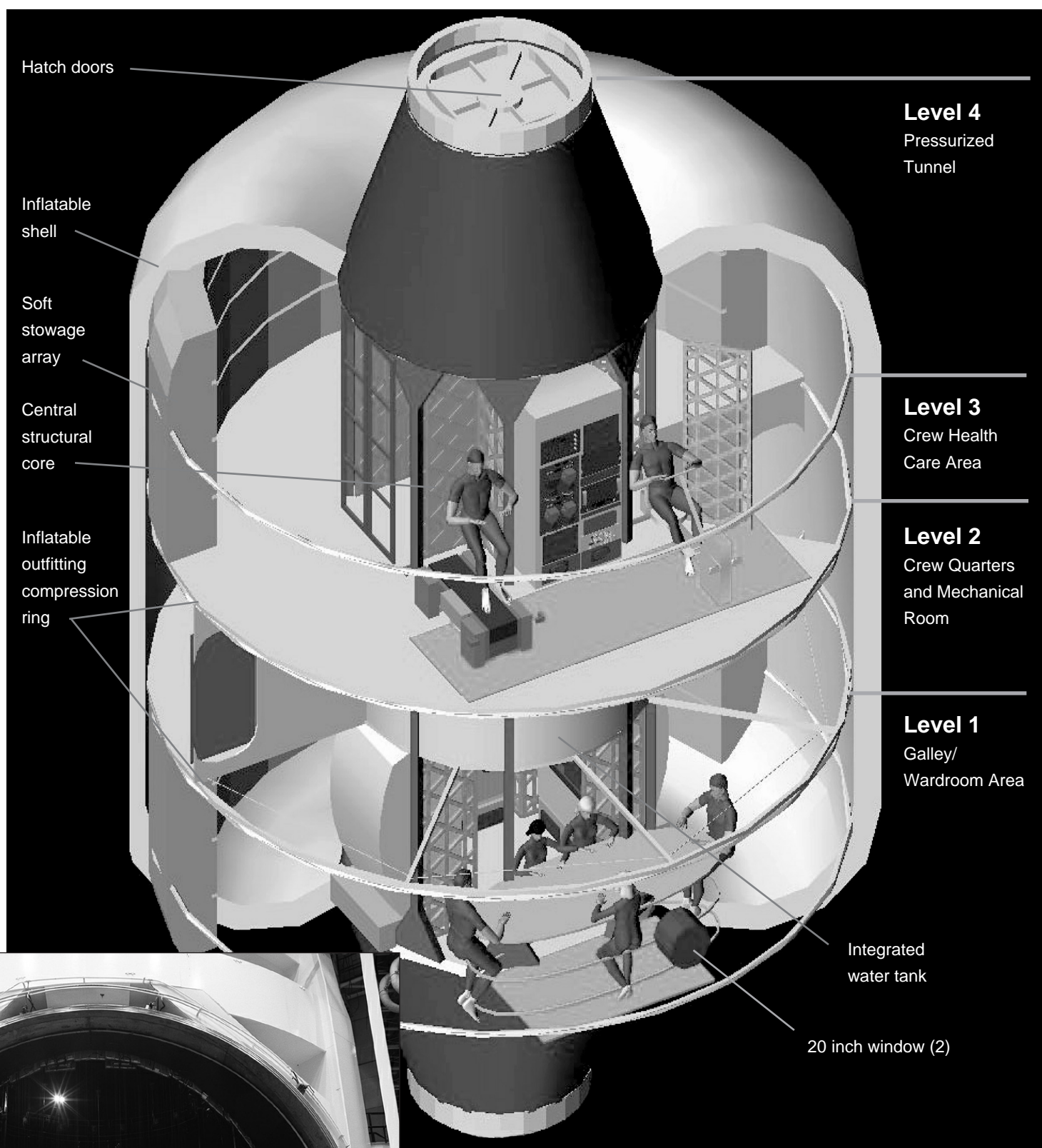
The December test was the final in a series of tests conducted in 1998 to demonstrate the feasibility of an inflatable structure. Two earlier units were hydrostatically tested at JSC's Neutral Buoyancy Laboratory, demonstrating the structural integrity of the fabric structure to a safety factor of four atmospheres (no aluminum space module has done this). This is the first time tests of this kind have been conducted, and this activity has generated interest from around the world.

The project began in the spring of 1997 when Leonard Nicholson, director of the Engineering Directorate, challenged engineers to find a way to develop a lighter, cheaper spacecraft for manned missions to Mars. Initially, a small group, led by Dr. William C. Schneider, developed the TransHab concept with something added to it – a proposal to the agency for JSC to build a full-scale unit and demonstrate the feasibility of the technology. Once TransHab was turned into a project, the TransHab team, led by JSC engineer Donna Fender, was formed. This group was ultimately challenged to design and build a full-scale structural test article to demonstrate the ability to manufacture, assemble, package, and deploy the inflatable module in a space simulation chamber, in addition to verifying the overall structural capability of the inflatable concept, all in 1998.

The resulting 3-stories-tall inflatable module concept, TransHab, offers significant advantages as a general purpose habitation module. It has been proposed to the International Space Station program as a replacement for the current baseline habitation module. "The TransHab project is a perfect example of the kind of technical innovation it will take to make

exploration affordable and real," said Nicholson. "Furthermore, consideration of TransHab for ISS application represents the kind of vision across programs that is also a key element of enabling exploration, plus it will make the space station a more productive place to live and work. The skill, energy, and dedication demonstrated by the team that has brought the TransHab design so far in such a short period of time tells me that our people are indeed ready to make new things happen."

The general structural configuration of TransHab consists of an outer multi-layer inflatable shell (over a foot thick) and a hard central structural core. The multi-layer shell consists of a redundant bladder assembly, a woven Kevlar restraint assembly, a meteoroid and orbital debris protection shield, and a multi-layer thermal insulation blanket.



Internal configuration of International Space Station TransHab

three times larger than a standard module and would double the entire ISS stowage capacity. The 3-level module would give astronauts a homelike environment for long-duration missions, including

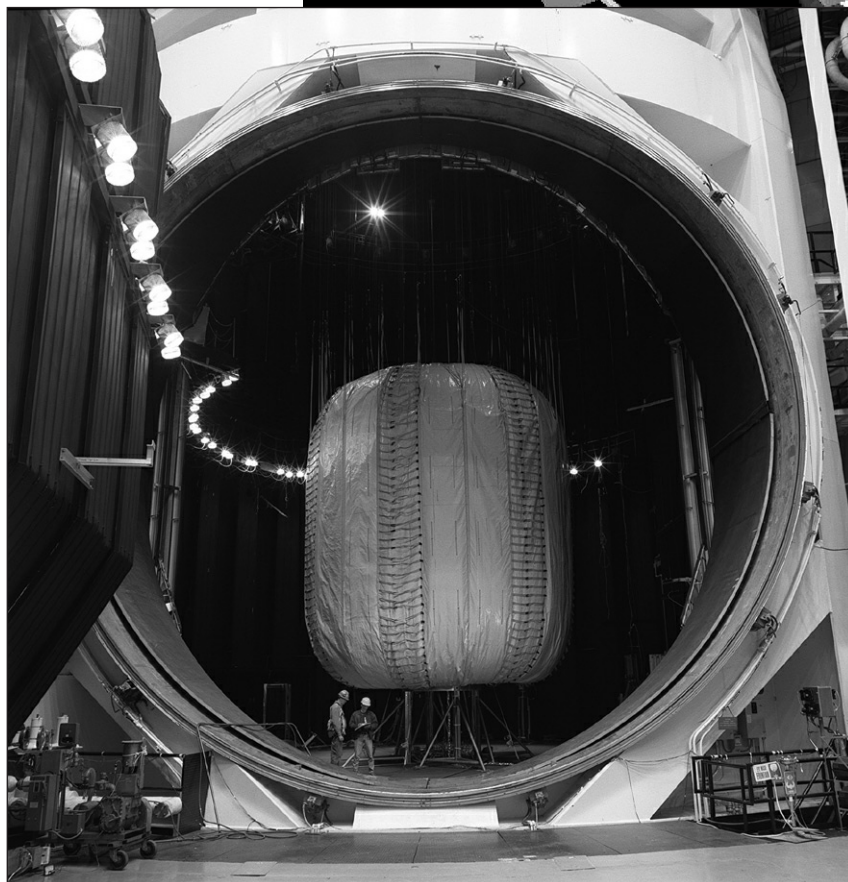
ISS crew and a shuttle changeover crew simultaneously.

This hybrid inflatable and central core structure is light and compact enough to be launched by the shuttle. The TransHab is collapsed and secured by a restraint

system in a 14-foot diameter package for launch in the shuttle payload bay. When on orbit, the packaged TransHab module would then be removed from the shuttle payload bay, docked to an element (like space station) and deployed by releasing the restraint. Once released, the TransHab would be inflated to its operational pressure, resulting in a 27-foot diameter module. Then the subsystems stored on structural shelves in the central core will be repositioned to the appropriate internal configuration.

The TransHab team is currently working with ISS to provide technical and management data

needed for the habitation module design selection decision. The decision is expected to occur in the February/March time frame. ■



JSC photo S99-00157 by Robert Markowitz

A full-scale TransHab undergoes vacuum testing in JSC's Space Simulation Chamber A.

The one-foot-thick TransHab meteoroid and orbital debris protection shield is capable of protecting against larger debris than standard hypervelocity shield concepts. The TransHab team has successfully demonstrated the protection provided by the MOD shield with particles up to 1.7 cm diameter at speeds of 7 km/s (15,000 mph).

The 11-foot diameter central core, running the full length of the module's interior, houses the crew quarters. The crew quarters are surrounded by a water jacket (known as the storm shelter) affording the crew additional protection during solar particle events. At 27 feet in diameter and 35 feet in length, TransHab's dimensions make its volume



JSC photo S98-14600

Donna Fender, program manager, JSC TransHab Project Office, holds a piece of the Kevlar material used to build the module.

six private crew quarters, a medical health and exercise area, hygiene facility, storage, galley, and wardroom equipped with a table capable of seating up to 12 persons, easily accommodating an entire

Ripped from the ROUNDUP

Ripped straight from the pages of old Space News Roundups, here's what happened at JSC on this date:

1 9 7 4

The Skylab 4 crew is home again after successfully completing man's longest journey into space – 84 days, 1 hour and 16 minutes.

William C. Schneider, Skylab program director, stated that because of the hard work of a great number of people, Skylab was able to achieve much more than was expected.

1 9 7 9

The year is 1990. A crew of technician astronauts is operating remote, automated construction equipment, assembling a solar power satellite at 400 miles above Earth. There is a glitch, and one beam does not line up correctly.

One astronaut puts on a pressure suit and climbs through the airlock into the payload bay. She reaches up, grabs a handrail and backs into a Manned Maneuvering Unit. After slipping the latches into the right slots, she releases a lever and flies to the construction site. She maneuvers the beam into place and returns to the orbiter to resume work.

Construction is still on schedule. The 250-pound MMU described above is in research and development stages today, planned to be a regular part of shuttle on-board equipment when the second orbiter is ready.

1 9 8 9

Technicians at Kennedy Space Center this week began replacing heat shields around *Discovery's* main engine nozzles following final hook ups on three replacement high pressure oxidizer turbopumps. Final STS-29 launch preparations are expected to begin next week.

The launch of STS-29 from Kennedy's launch complex 39-B is targeted for about March 10. The final launch date will be announced following completion of the flight readiness review at KSC next Friday.

Prior to the review, the space shuttle main engine program will complete verification of a new process for building up the oxidizer pumps.

STS-88 space walks product of team effort

Three planned extravehicular activities and one contingency excursion were successfully conducted during STS-88 to begin assembly of the International Space Station.

The momentous effort that went into preparing for these space walks included many JSC organizations, NASA and the contractor community as well as collaboration across two countries.

The Mission Operations Directorate, the Space Station Program Office, the EVA Project Office and the Crew and Thermal Systems Division in the Engineering Directorate were some of the principal organizations involved in planning the required space walks, training the crews, building the mockups and the spacesuits for the training sessions in the Neutral Buoyancy Lab, and compiling, building and checking all necessary tools. These efforts began about two years prior to the flight.

As the lead STS-88 EVA engineer in MOD, Scott Bleisath directed the crew's space walk training for the flight, developed their procedures and their checklist, and worked with them in verifying their procedures. Other MOD EVA team members included EVA systems experts Dana Weigel and Barbara Severance and EVA task experts Wayne Wedlake and Karina Shook.

The STS-88 crew received 538 hours of EVA training, including 239 hours in the water at the NBL.

The EVA Integrated Product Team in the EVA Project Office was responsible for providing all necessary tools. Most of the



NASA Photo STS088-355-015

Astronaut Jerry Ross, STS-88 mission specialist, is pictured during one of three space walks which were conducted on the 11-day mission. Astronaut Jim Newman, mission specialist, recorded this image. Newman can be seen reflected in Ross' helmet visor. The solar array panel for the Russian-built Zarya module can be seen along the right edge.

tools were designed and built by the engineers in the Crew and Thermal Systems Division and their support contractors.

"We ensured that all of the tools flown on STS-88 would fit each other and that tools left on orbit would fit with those to be delivered in the future," said Jeff Dutton, STS-88 EVA IPT lead.

Tool extensions were left on orbit during the mission. IPT members verified that all of the interfaces that the hardware providers

build will fit the tools. Barbara Counts and Lori Crocker of the EVA Project Office and Hamilton Standard were instrumental in the accomplishment of these objectives.

All three scheduled EVAs were successfully conducted during STS-88. An additional contingency EVA was accomplished to deploy two of Zarya's Toru antennas. ■

Poole, Harden receive NASA-wide recognition

Two JSC employees have received the NASA Procurement Award for their outstanding achievement in procurement activity. This prestigious award from the Associate Administrator for Procurement is given annually to exceptional members of NASA's procurement work force. Connie Poole was selected as NASA Procurement Supervisor of the Year and Yolande Harden was selected as NASA Contract Specialist of the Year.

As manager of the Space Shuttle Acquisition Management Office, Poole was recognized for her outstanding procurement support of the space shuttle, shuttle upgrade, and Phase I programs at JSC. She was responsible for the formation of a cohesive team approach to the management of the Space Flight Operations Contract, NASA's largest contract which spans multiple centers and diverse areas within each center.



JSC photo S98-20391 by James Blair

Connie Poole, left, and Yolande Harden display their NASA Procurement Awards.

Harden was recognized for her procurement expertise and the leadership skills she demonstrated as a contracting officer in meeting the challenging acquisition needs of the X-38 project. She served as the sole

acquisition representative on the multimillion-dollar X-38 De-Orbit Propulsion Module source evaluation board and at the same time maintained a separate, large workload of contracts. ■

TICKET WINDOW

Bldg. 3 Exchange Store hours are 7 a.m.-4 p.m. Monday-Friday.
Bldg. 11 Exchange Store hours are 9 a.m.-3 p.m. Monday-Friday.
For more information, please call x35350.

The following discount tickets are available at the Exchange Stores:

General Cinema Theaters	\$5.50
Sony Loew's Theaters	\$5.00
AMC Theaters	\$4.75
Moody Gardens (2 of 6 events)	\$9.75
Space Center Houston	adult \$10.25 . . . child (4-11)	\$6.50
(JSC civil service employees free.)		

All tickets are non-refundable.
Metro tokens and value cards are available.
The book fair will be held February 16-19 in Bldg. 3 cafeteria.

EAA events:

Tickets for the Houston Livestock Show and Rodeo are on sale now (limited seats and show performances).
Tickets are on sale for \$10.00 and \$19.00 for Grease on Ice, 2 p.m. February 28 (limited seats available).



PEOPLE *on the* **MOVE****Human Resources reports the following personnel changes as of January 16, 1999:****Key Management Assignments**

Ray Dell'Osso was named chief, EVA, Robotics, and Crew Systems Operations Division, Mission Operations Directorate.

Edgar Castro was selected as assistant for GFE supporting the deputy manager, technical development, International Space Station Program Office.

Additions to the Workforce

Missy Gard joins the International Space Station Program Office as a technical assistant to the deputy manager for operations, International Space Station Program Office.

Promotions

Laura Rochon was selected as a public affairs specialist in the Public Affairs Office.

Carla Bell was selected as a supply management specialist in the Center Operations Directorate.

Sylvia Ramirez was selected as a support services specialist in the Center Operations Directorate.

Reassignments Between Directorates

Lauri Hansen moves from the International Space Station Program Office to the Engineering Directorate.

Rich Rodriguez moves from the Space and Life Sciences Directorate to the International Space Station Program Office.

Brian Johnson moves from the International Space Station Program Office to the EVA Project Office.

Reassignments Between Centers

Keith Day of the Engineering Directorate moves to Dryden Flight Research Center.

Jeff Jones of the International Space Station Program Office moves to Ames Research Center.

Retirements

Nancy Cogan of the Office of the Chief Financial Officer.

Resignations

Audrey Rivers of the Public Affairs Office.

Sharon Robinson of the Space and Life Sciences Directorate.

Melinda Csaky of the Mission Operations Directorate.

DATES & DATA**February 12**

Astronomers meet: The JSC Astronomical Society will meet at 7:30 p.m. Feb. 12 at the Center for Advanced Space Studies, 3600 Bay Area Blvd. For additional information, call Chuck Shaw at x35416.

February 17

Scuba club meets: The Lunarfans will meet at 7:30 p.m. Feb. 17. For details, call Mike Manering at x32618.

Astronomy seminar: The JSC Astronomy Seminar will meet at noon Feb. 17 and 24 and Mar. 3 in Bldg. 31, Rm. 248A. For more information, call Al Jackson at x35037.

Spaceland Toastmasters meet: The Spaceland Toastmasters will meet at 7 a.m. Feb. 17 and 24 and Mar. 3 at the House of Prayer Lutheran Church. For more information, call George Salazar at x30162.

Communicators meet: The Clear Lake Communicators, a Toastmasters club, will meet at 11:30 a.m. Feb. 17 and 24 and Mar. 3 at Lockheed Martin, 555 Forge River Rd. For details call Allen Prescott at 282-3281 or Mark Caronna at 282-4306.

Spaceteam Toastmasters meet: The Spaceteam Toastmasters will meet at 11:30 a.m. Feb. 17 and 24 and Mar. 3 at United Space Alliance, 600 Gemini. For details, call Patricia Blackwell at 281-282-4302 or Brian Collins at x35190.

February 18

Directors meet: The Space Family Education board of directors will meet at 11:30 a.m. Feb. 18 in Bldg. 45, Rm. 712D. For more information on this open meeting, call Gretchen Thomas at x37664.

February 22

Alzheimer's support group meets: The Clear Lake Alzheimer's Caregiver Support Group will meet from 7:30 p.m. to 9 p.m. Feb. 22 in the first floor conference room in St. John Hospital, West Building, in Nassau Bay. For additional information, call Nancy Malley (281-480-8917) or John Gouveia (281-280-8517).

February 25

Radio Club meets: The JSC Amateur Radio Club will meet at 6:30 p.m. Feb. 25 at the Piccadilly, 2465 Bay Area Blvd. For details, call Larry Dietrich at x39198.

March 1

NSBE meets: The National Society of Black Engineers will meet at 6:30 p.m. Mar. 1 at Texas Southern University, School of Technology, Rm. 316. For additional information, call Kimberly Topps at 281-280-2917.

March 4

Warning System Test: The site-wide Employee Warning System will perform its monthly audio test at noon Mar. 4. For additional information, call Bon Gaffney at x34249.

April 14

IAAP meets: The Clear Lake/NASA Chapter of the International Association of Administrative Professionals (formerly Professional Secretaries International) will meet at 5:30 p.m. April 14 at Bay Oaks Country Club. Cost is \$16. For details and reservations, call Tami Barbour at 281-488-0055, x238.

NASA BRIEFS**DATA HELPS SCIENTISTS UNDERSTAND HURRICANES**

An eye that winked, a rain of ice crystals, and striking lightning show that hurricanes lead more complex lives than anyone had suspected. More details - and fuller understanding of one of nature's more ferocious weather phenomena - will come in the next year as scientists analyze thousands of hours of data collected during the most comprehensive hurricane study project ever conducted. NASA scientists, working with colleagues at NOAA, universities from Wisconsin to Florida, and researchers in the military and the weather industry, are studying data collected by the CAMEX-3 experiment. Visit <http://www1.msfc.nasa.gov/NEWSROOM/news/releases/1999/99-010.html> to see some interesting photos and video, and hear a scientist explain the experiment in her own words.

STARDUST TO COLLECT COMETARY PARTICLES

Stardust will be the first U.S. mission launched to fly close to a comet and collect cometary material for return to Earth for analysis. It will encounter comet Wild 2 in January of 2004. The Stardust spacecraft also will bring back samples of interstellar dust. These materials consist of ancient pre-solar interstellar grains and other remnants left over from the formation of the solar system. Scientists expect their analysis to provide important insights into the evolution of the sun and planets and possibly into the origin of life itself.

HUBBLE TECHNOLOGY BENEFITS NEW SATELLITE PHONE SYSTEM

Computer software developed for NASA's Hubble Space Telescope will soon help operate a worldwide, satellite-based phone system called Globalstar. This software is a key feature of NASA Goddard Space Flight Center's "Vision 2000," a forward-looking effort to optimize the ground system operations and control of the Hubble Space Telescope.

The "Vision 2000" software allows scientists and engineers to access and display Hubble spacecraft- and ground-systems data through the Internet. Now engineers can log on from home or other remote locations via their personal computers.

GILRUTH CENTER NEWS

CHECK OUT ALL ACTIVITIES AT THE GILRUTH ONLINE

<http://www4.jsc.nasa.gov/ah/exceaa/Gilruth/Gilruth.htm>

Hours: The Gilruth Center is open from 6:30 a.m.-10 p.m. Monday-Thursday, 6:30 a.m.-9 p.m. Friday, and 9 a.m.-2 p.m. Saturday. Contact the Gilruth Center at 281-483-3345.

Sign up policy: Sign up in person at the Gilruth Center and show a yellow Gilruth or weight room badge. Classes tend to fill up two weeks in advance. Payment must be made in full, in exact change or by check, at the time of registration. No registration will be taken by telephone. For details, call x33345.

Gilruth badges: Required for use of the Gilruth Center. Employees, spouses, eligible dependents, NASA retirees and spouses may apply for photo identification badges from 7:30 a.m.-9 p.m. Monday-Friday and 9 a.m.-2 p.m. Saturdays. Cost is \$10. Dependents must be between 16 and 23 years old.

Nutrition intervention program: Six-week program includes lectures, a private consultation with the dietitian and blood analysis to chart your progress. For more information call Tammie Shaw at x32980.

Defensive driving: One-day course is offered once a month at the Gilruth Center. Pre-registration required. Cost is \$25. Call for next available class.

Stamp club: Meets every second and fourth Monday at 7 p.m. in Rm. 216.

Weight safety: Required course for employees wishing to use the Gilruth weight room. The next classes are scheduled for 8 p.m. Feb. 25 (must be on time to receive credit for class). Pre-registration is required. Cost is \$5. Annual weight room use fee is \$90. The cost for additional family members is \$50.

Exercise: Low-impact class meets from 5:15-6:15 p.m. Mondays and Wednesdays. Cost is \$24 for eight weeks.

Step/bench aerobics: Cardiovascular workout. Classes meet from 5:15-6:15 p.m. Tuesdays and Thursdays. Cost is \$32 for eight weeks. For additional information, call Kristen Taragzewski, instructor, at x36891.

Yoga: Stretching class of low-impact exercises designed for

people of all ages and abilities in a Westernized format. Meets Thursdays 5-6 p.m. Cost is \$32 for eight weeks. Call Darrell Matula at x38520 for details.

Ballroom dancing: Classes meet from 7-8:15 p.m. Thursdays for beginner advanced classes and from 8:15-9:30 p.m. for beginner-intermediate and intermediate students. Cost is \$60 per couple.

Country and western dancing: Beginner class meets 7-8:30 p.m. Monday. Advanced class (must know basic steps to all dances) meets 8:30-10 p.m. Monday. Cost is \$20 per couple.

Fitness program: Health-related fitness program includes a medical screening examination and a 12-week individually prescribed exercise program. For details call Larry Wier at x30301.

Registration for spring softball began Feb. 1 and will end Feb. 13.

C O M M U N I T Y N E W S

Space Center Intermediate School educators visit JSC

By John Ira Petty

About 90 teachers and administrators at Space Center Intermediate School got a close-up look at the nation's human space flight program during an early January visit at Johnson Space Center.

The school, part of the Clear Creek Independent School District and now across the street from Clear Lake High School, has about 1,200 students. It is scheduled to move next fall to the new facility under construction on the northwest side of JSC. About 1,400 students will attend.

Center Director George Abbey told the educators that "We look upon our partnership with the Clear Creek Independent School District as being an important part of our mission. You represent the future. As we look ahead to what we have to do beyond space station, as we look at the missions we're going to be doing beyond Earth orbit, the key to those missions is the youth of today."

The future of the nation in an increasingly competitive world depends on technology. "So we look at our involvement with you as important to us. We want to support you in what you do with young people.

"We look at this as a partnership," Abbey said. With the new school on JSC land, he said, "we hope ... we can work with you and provide the resources and capabilities that you will have to have to do your job. You are really the key to the future."

Astronaut Yvonne Cagle told the educators their visit to JSC was sort of a "Rendezvous with space. "A career in space



JSC Photo S99-00191

Mae Mangieri, left, and Lori Wheaton of the education department in the Public Affairs Office observe Space Center Intermediate School educators as they check out online NASA resources during their recent visit to JSC.

is more than just a profession. It is an expression of our enchantment with the galaxy, where the fascination lies less with the answers than with the questions.

"A career in space is a personal invitation to explore the most remote crevasses of our universe in search of resources and remedies that can one day serve to preserve, restore and preserve our health and our environment." Health and environment affects everyone. "So not only is space for everyone, but everyone should be for space," Cagle said.

A physician who was selected as an astronaut in April 1996, Cagle showed the

teachers and administrators a film about astronaut training. Study is critical to prepare astronauts for flight, she said. She urged her audience to remind their pupils that not all study is done at a desk.

Canadian Astronaut Chris Hadfield presented slides from STS-74, the November 1995 mission on *Atlantis* that installed the docking module on the Russian space station Mir.

He described the emotion on the orbiter after the successful docking of the module to Mir. "You're so busy, you're so focused, and you've been training for so long that no one said anything about

what had happened for about five minutes." Then, one of the crew said "We did it - we're here," he recalled, and there were congratulations all around.

Hadfield also talked about the International Space Station. He is scheduled to fly on STS-100 in the year 2000 to the ISS. The mission that will include a crew changeout, delivery of an Italian-made logistics module and installation of an advanced Canadian robotic arm. During that mission he is to become the first Canadian to perform a spacewalk.

Hadfield was selected as a Canadian astronaut in June 1992. He had been a test pilot, working with U.S. Air Force and U.S. Navy aircraft. Before becoming a test pilot, He had flown Canadian CF-18 aircraft for NORAD.

During those years he intercepted Soviet aircraft probing North American defenses and armed with weapons of mass destruction. His own aircraft was armed too - it was a time of threat, counterthreat and tension.

Today former Soviet military pilots are among the Russian cosmonauts.

Much of the educators' day was devoted to a visit to training facilities in Bldg. 9, a stop at a computer lab in Bldg. 12 for an introduction to online NASA resources, and a hands-on partnering session as well as discussion on interdisciplinary projects in a Bldg. 17 classroom.

"It was a real learning experience," the school's principal, James Stephens, said that afternoon, especially for those teachers new to the area. "We're looking forward to developing that working relationship with JSC." ■

1998 - A banner year for on-site blood drives

With the December 1998 blood drive, JSC's On-site Blood Drive Program concluded the most productive year since the inception of its partnership with St. Luke's Episcopal Hospital.

Generous donors gave 364 pints of blood during the December drive. The timing of the event was especially important because blood is always in short supply during the holidays.

Overall, JSC employees and contractors donated 2,230 pints of blood during 1998 blood drives. That represents a 46 percent increase over last year's total of 1,523 pints. Employee participation in the blood drive program has been increasing ever since 1996, when the JSC

Blood Drive Committee was formed to initiate a push to get more employees interested in donating blood. Prior to that, the program typically drew about 400 donors per year.

Deana Hackfeld, of the Space Station Program Office, was the lucky 2,000th donor for 1998 and received a gift certificate to a local seafood restaurant as a special door prize. She said, "I give because it's a good thing to do. There are lots of sick folks who could use every drop that can be donated. Many of them are children with leukemia or some other rare disease. These children need our help. The whole process takes less than half an hour. That's not very much time to help save a life." ■

Girls Scouts send powerful message: friendship conquers hatred

Six thousand two hundred and forty-four Girl Scouts, their leaders, and adult Girl Scout volunteers recently joined hands in friendship to form the World's Largest Friendship Circle at Six Flags AstroWorld theme park in Houston. San Jacinto Girl Scout Council made the world-record attempt to illustrate that friendship conquers hatred in every situation and in every part of the world.

Houston Mayor Lee Brown and Coach Van Chancellor of the WNBA World Champion Houston Comets were the official witnesses and provided Guinness Book of World Records with a signed statement to authenticate the attempt. Astronaut Yvonne Cagle was among the honored guests. ■



Cadette Girl Scout Lori E. and Astronaut Yvonne Cagle speak to the crowd at the Astroneedle stage during the Friendship Circle presentation.

The blood drive schedule for 1999

- ♥ February 17 and 18
- ♥ April 21 and 22
- ♥ June 23 and 24
- ♥ August 19 and 20
- ♥ October 20 and 21

For your convenience, JSC blood drives are open from 7:30 a.m. to 4:30 p.m.

If you would like more information about donating blood, see JSC's blood donor program Web site located on the Human Resources homepage. Retirees may view the Web site on the JSC retiree homepage.

Or call Dan Mangieri at x33003.

Another perfect score for JSC Water and Food Laboratory

The Water and Food Analytical Laboratory in Bldg. 37 operated by Wyle Laboratory supports space flight food analysis, but its primary responsibility is to perform spacecraft water quality analysis. Scientists have conducted routine water analyses for the Space Shuttle Program over the years.

During recent years, the laboratory's major challenge has been to analyze recycled water to determine its potability. To accomplish this objective, scientists have analyzed samples of recycled water produced on Mir and water transferred from the shuttle to Mir. Indeed, they developed the basic concept used for that transfer. In addition, they have analyzed recycled water samples obtained during developmental tests of the International Space Station water recovery system.

Scientists in the lab also support manned chamber tests for the Advanced Life Support Program and provide technical direction for the development of the water quality monitoring hardware that is a component of the Crew Health Care System



The Water and Food Analytical Laboratory correctly determined the concentrations of all samples received from Analytical Products Group, Inc., during the past two quarters. Lab employees are, from left, front: Sandra Carr, Marie Gibson, and Lizanna Pierre; middle: Lydia Ding, Matthew Drybread, Mike Kuo, Marie Hwang, Esther Liu, and David Orta; back: John Straub, Debrah Plumlee, John Schultz, Judy Svoboda, Jeffrey Rutz, and Paul Mudgett. Not pictured: Curt Wiederhoeft, Richard Sauer.

JSC Photo S99-00849 by James Blair

(ChES) for the International Space Station.

To verify the quality of the lab's standards and equipment as well as the calibration of instruments and to test the accuracy of procedures against those of laboratories across the country, the chemists participate in a Proficiency Environmental Testing Program conducted by Analytical Products Group, Inc.

Every quarter APG sends samples to the lab, the concentrations of which are unknown. Chemists analyze the samples and submit their results to APG within a 1-month period. APG then determines the acceptability of the results, ranks the laboratories, and mails the results back.

The competition is intense. In October, 254 labs participated in the program, while 248 took part in July. The average score attained by all participants is 92 percent, while the JSC laboratory attained a score of 100 percent and was in the APG top rank. ■

Got the squeeze, call the 33333's

Did you know that 70 million Americans have cardiovascular disease? Approximately one million deaths each year are attributed to cardiovascular disease. Half of those deaths are the result of heart attacks. Many of these deaths are preventable through early recognition and prompt initiation of emergency procedures.

Would you know how to recognize the symptoms of a heart attack? In yourself, family and friends? A recent study found that the average time between the first symptoms of a heart attack and seeking medical attention is four hours. One of the biggest problems, prevalent in men and woman, is DENIAL.

To increase awareness, prevention, and response to heart disease and heart attacks, Dr. David Williams, JSC Space and Life Sciences director, has initiated a campaign called "GOT THE SQUEEZE, CALL THE 33333'S." The program, to be kicked off in February, will increase

heart disease awareness and expand the number of cardiopulmonary resuscitation-trained personnel on site. A working group, comprised of health, safety, medical, emergency response and human resources representatives, has been working out the details. The campaign consists of three initiatives.

The first, a 15-minute course titled "Got the Squeeze, Call the 33333'S," is intended to increase awareness of heart attack symptom recognition and prompt initiation of emergency response to heart attacks. This course will be given as an addition to all site safety and health training courses and will be offered to all directorates for presentation at safety meetings and during local training classes. The goal is to train at least 50 percent of JSC's

population within the coming year.

The second initiative is mass CPR training to supplement the number of CPR-trained personnel about the center. CPR courses will be offered at the Gilruth February 5, 12, 19 and 26. The objective is to train 500 on-site employees in the proper administration of CPR. Additional CPR courses will be offered throughout the year. The long-term goal is to have 30 percent of the on-site population CPR trained in the next year.

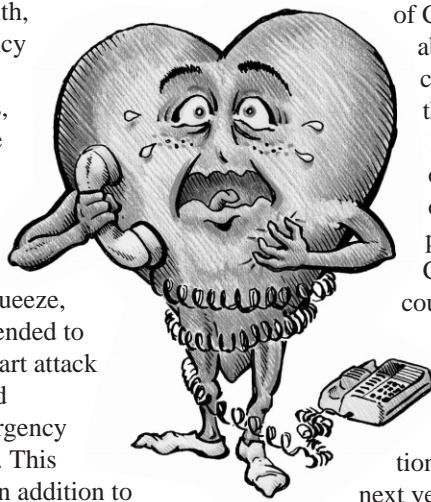
The third initiative is to determine the feasibility of placing automatic external defibrillators in areas of need across the center. Used to supplement JSC's two advanced cardiac

life support ambulances, this important lifesaving device will provide JSC emergency responders and specially trained personnel with additional potential life-saving capabilities.

To register for a CPR course or to request the heart attack awareness course, "Got the Squeeze, Call the 33333's," call x36475 or x36369.

Common signals of a heart attack include chest pain that lasts longer than 10 minutes and is not relieved by ceasing activity, changing position or taking medication; breathing difficulty; fast, slow or irregular pulse; pale, bluish skin; and heavy, unexplained sweating.

Always remember heart attack victims require immediate, advanced medical care. For assistance in the event of a possible heart attack, call x33333 on site or at the Sonny Carter Training Facility, x47231 or x44444 at Ellington Field, or 911 if off site. ■



Human Test Subject Facility seeks volunteers

The Human Test Subject Facility at JSC is currently recruiting post-menopausal or post-hysterectomy women (up to age 65) for a cardiovascular clinical study designed to determine the effects of estrogen on the heart and blood vessels. Volunteers must be non-smokers in good health with no allergies to medications. Volunteers must also have no history of cardiovascular diseases or breast cancer.

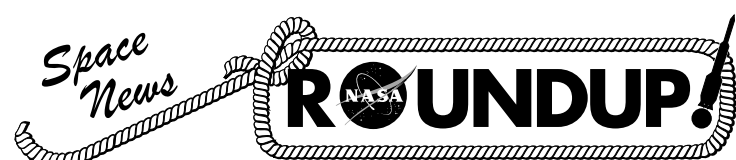
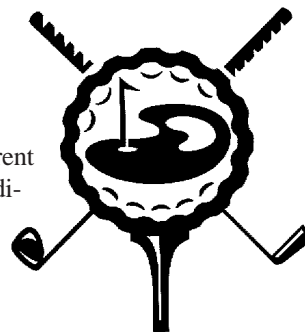
To qualify, volunteers must complete the required physical exam which includes a blood work-up, ECG, vision and hearing screening, and a treadmill test. Volunteers may be compensated for their time (restrictions apply to NASA and contractor personnel).

For additional information and initial prescreening, contact Dr. Dominick D'Aunno at 281-483-5542. ■

JSC Golf Association tees up

The JSC Golf Association will begin its 1999 tournament schedule on February 20. Designed for civil service and contractor golfers who enjoy competitive play, strictly by USGA rules, 9-stroke-play tournaments will be held at different courses during the year. Flights are established (max 36 handicap or about 110 max scores) and season winners are determined by points from the best seven of nine tournaments.

For information, contact Larry Magers at 281-326-1803 or Ken Baker at 281-282-2590. For more information visit www.ghgcorp.com/wroders/jscga/. ■



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