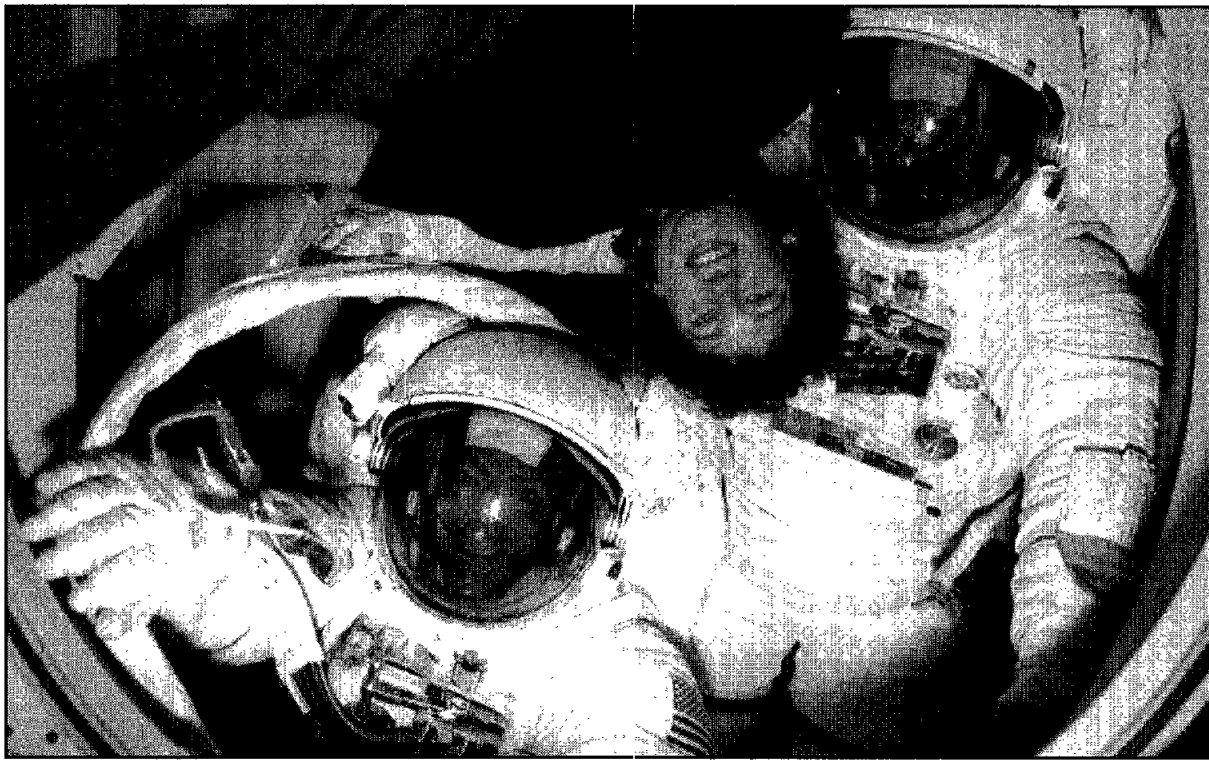


Space News Roundup

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STS-54 Mission Specialist Susan Helms almost squeezes into the tight quarters of *Endeavour's* airlock to share space with Mission Specialists Mario Runco, left, and Greg Harbaugh, attired in their extravehicular mobility unit space suits. Helms helped coordinate the two space walkers' activities from the aft flight deck of *Endeavour*.

Endeavour, crew complete diverse flight objectives

Endeavour glided to a smooth landing on Kennedy Space Center's runway 33 at 7:38 a.m. Tuesday, ending a successful six-day mission that deployed a NASA communications satellite and completed various science investigations and operational tests.

The crew—Commander John Casper, Pilot Don McMonagle and Mission Specialists Mario Runco, Greg Harbaugh and Susan Helms—returned to JSC Tuesday evening.

The shuttle mission management team waited until the last minute to give the "go" for a deorbit burn, awaiting Chief Astronaut Hoot Gibson's assessment of weather conditions at the Cape. A first landing opportunity just after 6 a.m. was passed up due to ground fog and low clouds.

During their last full day in space, the STS-54

astronauts successfully restarted a fuel cell on-orbit for the first time. In the Space Station *Freedom* era, the shuttle will be docked to the station for a month or more at a time. This would require a power down of shuttle equipment to conserve cryogenic fuels for producing electrical power.

Earlier in the flight, the crew deployed Tracking and Data Relay Satellite-F, which is now TDRS-6, a ready spare for the other TDRS satellites providing continuous communications for space shuttles and other NASA satellites in geosynchronous orbit.

Runco and Harbaugh completed a 4-hour, 28-minute space walk on Flight Day 5. The extravehicular activity was the first of a succession of tests designed to better prepare crews, trainers and controllers for the assembly and maintenance of

Space Station *Freedom* beginning in 1996.

"I think we learned an awful lot," Harbaugh said the day after the space walk. "And I think we have some positive suggestions for enhancing our training process. I think we learned some things here that we can apply to space station to do the job better."

Runco said the experience was unique. "One of the moments I remember most was when we were doing the large Orbital Replacement Unit exercise...we were over Florida and I happened to look up. The whole state was clear... I've seen photos of Florida from orbit and heard people describe seeing it...but I was really unprepared. The view was so spectacular that it really took my breath away," he said.

Casper said the shuttle performed flawlessly during the mission. "This is a magnificent, wonderful flying machine," he said. "It is just amazing to be up here traveling at nearly 18,000 miles per hour and everything's humming along and working just right."

In spite of a slow start, the Diffuse X-Ray Spectrometer took in more than 50,000 seconds of data through its port detector in *Endeavour's* payload bay, and more than 30,000 seconds through its starboard detector.

High counts of high-energy particles initially led to some problems with the instrument early in the flight of STS-54. However, by purging the detectors with gas and heating them, ground controllers at the Goddard Space Flight Center were able to return the instruments to operation.

Astrophysicists analyzing preliminary data from the instruments. Please see **SPECTROMETER**, Page 4



Crew praises shuttle's versatility

Thanks fellow team members for hard work, dedication

By Kelly Humphries

"I'm not sure we're really all back down to Earth yet," STS-54 Commander John Casper told family, friends and coworkers who Tuesday evening welcomed the crew back to Earth.

"Our emotions are just going, we're still excited, we just had a great flight," Casper added.

A downpour drenched the faithful crowd awaiting the crew's arrival at Ellington Field, but the rain slowed to a soft drizzle when the crew climbed the platform stairs.

"The STS-54 crew got us off in 1993 to an outstanding start," said JSC Director Aaron Cohen. "The launch, the on-orbit operations and the landing were truly outstanding. The professionalism and dedication that was displayed by this crew

made the start of this year just wonderful."

Each of the crew members paid tribute to the many JSC workers who had helped make the six-day flight a success.

"This flight showed the versatility of the space shuttle, tremendous versatility. We used it to deploy a payload, we used it for astronomy and used it as an orbiting classroom, really. We used it for research and development and all kinds of secondary experiments," Casper said. "But NASA is more than just a machine, it's more than that space shuttle—it's people, and that's what makes the difference."

"We appreciate many, many times more than we can ever say to you all the hard work that you do day in and day out to make this

nation's space program the great space program that it is," he added.

"There's this bright light back there and there's a bunch of silhouetted faces in front of the light and right now I can't see all the faces," said Mission Specialist Mario Runco, one of the flight's two space walkers. "It reminded me of stepping onto that platform when I was on the sill of the shuttle and I was looking out over the Earth and seeing a whole bunch of stars. I've got that impression right now. I'm looking at a whole bunch of stars."

Runco's fellow space walker Mission Specialist Greg Harbaugh said he was proud of the crew and the job it did.

"I really, really appreciate the efforts of all the folks who have

Please see **HOME**, Page 4

New ethics code going into effect

Starting Feb. 3, JSC employees will put away the "Yellowbook," sometimes affectionately known as the "Yellow Peril," and begin to work under a new ethics code that covers the entire executive branch.

The new federal standards of ethical conduct are based on the same statutes and executive order as the old "Standards of Conduct for NASA Employees" they supersede, but there are some changes that will affect employees, according to Dan Remington, JSC assistant chief counsel for general legal matters. All were covered to some extent in the NASA Yellowbook.

The Office of Government Ethics also published new confidential financial interest report forms (SF 450) and associated reporting requirements and established comprehensive ethics training requirements. All civil service employees should have received an explanation of the new ethics materials by now, and many will soon begin taking required training courses. The courses are designed for procurement officials and JSC employees who file either the public or confi-

dential financial interest reports, approximately 1,700 people.

The basic ethical principles of the new code are remain the same as always: that public service is a public trust and that you must put in an honest effort in the performance of the job; that you not use public office for private gain; that preferential treatment not be given to private organizations or individuals; that you not misuse government property, resources or inside information; that you disclose fraud, waste and abuse; that you not have financial interests or participate in any outside activity that conflicts with the performance of your official duties; and that you not accept gifts from contractors or those seeking to do business with NASA.

The most noticeable changes in the new regulations involves "gifts." Under the new regulations there are some items that logically can be considered to be gifts (and are under the Yellowbook), but which by express definition are excluded from that category.

Please see **NEW**, Page 4



Four Germans train for the upcoming Spacelab-D2 flight in JSC's Bldg. 9. From left are alternate Payload Specialists Renata Brummer and Gerhard Thiele, and Payload Specialists Ulrich Walter and Hans Schlegel. The alternates will serve as payload communicators during the flight.

Columbia's next in shuttle line-up on Spacelab-D2

Columbia and its seven-person crew are up next in the 1993 shuttle flight schedule, with STS-55 and the German-United States cooperative Spacelab-D2 mission aiming for a launch in late February.

Columbia is scheduled to move from the processing hangar to the Vehicle Assembly Bldg. at KSC next week to be mated with its fuel tank and solid rockets. After about five days in the VAB, it will be moved to the launch pad for final preflight preparations.

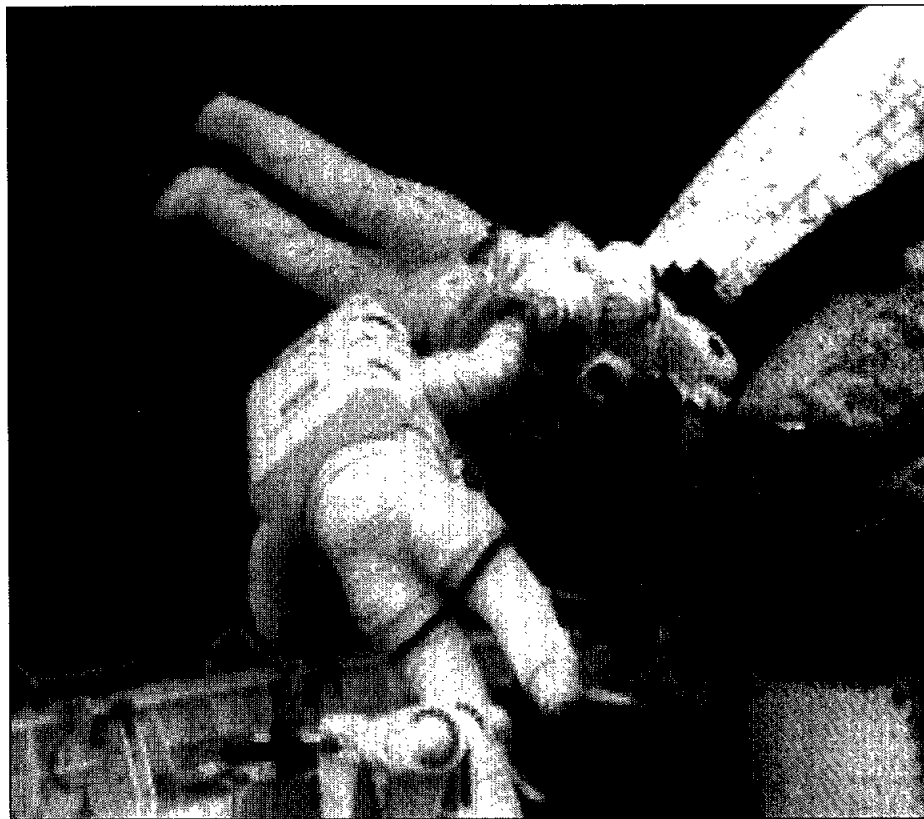
The crew includes Commander Steve Nagel, Pilot Tom Henricks, Mission Specialists Jerry Ross, Bernard Harris and Charles Precourt, and Payload Specialists Hans Schlegel and Ulrich Walter.

Shuttle managers currently plan to meet Feb. 11 to set an official launch date for STS-55 following a flight readiness review.



Test Bed for Tomorrow

Space Station *Freedom* precursor work continues on shuttle throughout 1993



Left: STS-54 Mission Specialists Mario Runco and Greg Harbaugh test their ability to handle large items similar in size and mass to the orbital replacement units of Space Station *Freedom*. The space walk was designed to refine training methods for future space walks; expand the experience of ground controllers, instructors and astronauts. Below: An artist's concept shows Space Station *Freedom* in its man-tended configuration. One of two nodes and the U.S. laboratory module will provide pressurized work space for visiting astronauts. The man-tended configuration is scheduled to be achieved in late 1996.

With launch of the first element of Space Station *Freedom* just three years away, STS-54 and the rest of the 1993 shuttle missions are serving as a test bed for assembly and operation of the permanent international laboratory in low-Earth orbit.

The space station program is on schedule to complete its first critical design review in June. The CDR is a major program milestone. It marks a commitment on the part of space station program managers to proceed from the design stage to the fabrication and acquisition of flight hardware and software. The CDR includes the review of thousands of engineering drawings and other design documents by NASA and its contractors.

"We are quickly approaching the point in space exploration where astronauts will be conducting valuable research on a permanent basis," said Space Station Director Dick Kohrs. "In the years to come, we are going to use the space shuttle to give us additional research capability and confidence in the techniques to be used aboard *Freedom*."

Beginning with STS-54 and ending with the eighth mission in December, astronauts will conduct space walks, materials and life sciences research in the Spacelab laboratories and small-scale experiments to prepare for long-duration stays in space aboard *Freedom*.

Space walks will be conducted on at least three flights in 1993 to better prepare astronauts for station assembly and maintenance. *Endeavour's* maiden voyage in May 1992 demonstrated the complexity and unknowns associated with manipulating large objects in space when astronauts rescued the Intelsat spacecraft and experimented with space station assembly techniques.

Future space walks are designed to help planners better predict the length of specific tasks during each space walk and to investigate the use of handrails and foot restraints while maneuvering

equipment similar to that being designed for *Freedom*.

The 4 hour, 28 minute space walk of STS-54 Mission Specialists Greg Harbaugh and Mario Runco was the first in a series of test space walks that will be conducted on every available shuttle mission during the years leading up to the construction of *Freedom*, scheduled to begin in 1996.

The tests are designed to refine training methods for future space walks; expand the experience of ground controllers, instructors and astronauts; and aid in better understanding the differences between weightlessness and the underwater facility used to train crews.

First-time space walkers Runco and Harbaugh concentrated on evaluating how well they adapted to EVA conditions; their ability to move about the cargo bay with and without baggage; their ability to climb into a foot restraint without handholds; and their ability to align a large object similar in size and mass to space station orbital replacement units.

STS-54 also marked the first on-orbit shutdown of a space shuttle's electricity-generating fuel cells. *Endeavour's* fuel cell 2 was shut down for 10 hours and then restarted. In the space station era, the shuttle will be docked to the station for a month or more at a time, requiring shuttle systems to be powered down to conserve the super cold hydrogen and oxygen used to produce electricity.

STS-54 also included the first use of a space station precursor experiment called the Application Specific Preprogrammed Experiment Culture System. This cell growth and maintenance device will support cell biology research and improve existing bioreactor technology. The culture chamber is a test bed to demonstrate movement of a fluid through the unit to

provide constant nutrients to growing cells, and will fly again on STS-57.

STS-55 — FEBRUARY

The first Spacelab module flight of 1993 is a German-sponsored mission to continue studies in materials and life sciences research to further technology development for use in the space station era. This second in a series of dedicated flights for Germany — called SL-D2 — is scheduled to last nine days and follows the first German Spacelab mission flown in October 1985 aboard *Challenger*.



"In the years to come, we are going to use the space shuttle to give us additional research capability and confidence in the techniques to be used aboard Freedom."

— Space Station Director Dick Kohrs

STS-56 — MARCH

The Atmospheric Laboratory for Applications and Science-2 mission is the second in a series of missions to measure the long-term variability in the total energy radiated by the Sun and study its interaction with Earth's atmosphere. The first ATLAS flight was aboard *Atlantis* in March 1992. This Spacelab mission will use pallet-mounted hardware in the payload bay to study the Earth's atmosphere and variables in the solar spectrum.

Also included on this flight will be ODERACS or Orbital Debris and Radar Calibration Spheres. This experiment will help calibrate ground-based instruments used to track orbital debris. Three pairs of precisely machined metal spheres of different diameters will be released from a canister in the payload bay.

The spheres will be tracked by ground

radar to more accurately calibrate the radar. This will allow a better determination of life expectancy of space debris, assisting in the development of *Freedom's* protective shield. ODERACS was flown on STS-53 in December 1992, but a loss of battery power inside the canister prevented release of the spheres.

STS-57 — APRIL

The primary STS-57 objective is to fly the first Spacehab middeck augmentation module and retrieve the European Retrieval Carrier that was deployed from *Atlantis* on the STS-46 mission in August 1992.

Spacehab is a pressurized module that more than doubles the amount of mid-deck locker space available to scientists for smaller, "secondary" experiments to be monitored by the crew.

ASPECS will be flown as a full-up experiment on STS-57 to grow larger, high fidelity tissue cells for clinical research, including cancer cells that will be brought back to Earth for study.

On the ground, cells tend to lose their neutral buoyancy or ability to remain suspended in the nutritional fluids inside the chamber. In space, however, the cells can grow larger without floating toward the chamber walls. On the shuttle, ASPECS will serve as the "foundation experiment" for the development of bioreactor technology on the space station. Growing cells to full maturity may take several months, which can be done only on long-duration flights aboard *Freedom*.

Spacehab also will carry a space station flight experiment called the Environmental Control and Life Support Systems Flight Experiment, containing two critical components of *Freedom's* environmental control system.

STS-57 is being considered for another space walk to continue training for station assembly and maintenance.

In addition, STS-57 will carry a Get-away Special canister rack in the payload bay including small-scale experiments to help in the development and operation of the space station. Experimenters will conduct investigations in gas transfer from one tank to another, plant growth, effects of microgravity and radiation on bacteria and in cleaning and purifying effluents for long-duration space usage.

STS-51 — JULY

In addition to the primary tasks of deploying the Advanced Communications Technology Satellite and the Orbiting Retrieval Far and Extreme Ultraviolet Spectrometer-Shuttle Pallet Satellite, the STS-51 crew will expose various materials to the space environment.

The Limited Duration Space Environment Candidate Materials Exposure experiment will expose these materials to the atomic oxygen prevalent in low-Earth orbit. This will help determine which materials are best for use in future spacecraft design, including the space station, to ensure long-term survivability in space. *Freedom* is being designed for a minimum 30-year life span.

STS-51 also is being considered for another space walk to continue space station proficiency training for space station assembly and maintenance.

STS-58 — AUGUST

The third Spacelab flight of 1993 will include a pressurized module on a 13-day mission. The SLS-2 Spacelab Life Sciences mission is the second devoted exclusively to understanding how the human body reacts and adapts itself to the space flight environment. This science is of particular interest since plans call for astronauts to live aboard *Freedom* for periods of 90 days or more.

The first SLS mission flew for nine days in June 1991 aboard *Columbia*, conducting a wide array of medical tests to evaluate how well the crew adapted to the microgravity environment. SLS-2 will continue these medical evaluations.

This will be the second "extended duration" shuttle mission. STS-50 in June 1992 lasted 14 days and is the longest shuttle mission to date. SLS-2 will continue the process of certifying the shuttle for longer flights docked to *Freedom*.

STS-60 — NOVEMBER

The second Spacehab flight will carry a large complement of secondary experiments in the additional middeck locker space. The module is attached to the orbiter's airlock and more than doubles the space to conduct secondary materials and life sciences investigations.

STS-60 also will carry the Wake Shield Facility designed to be released from the payload bay to create an atomic oxygen wake as it circles the Earth—in essence, an orbiting vacuum chamber. WSF will create its own vacuum chamber to produce extremely pure materials, atom by atom, by growing thin film crystals on an atomic template. Uses of such pure materials range from microelectronics to lasers and superconductivity.

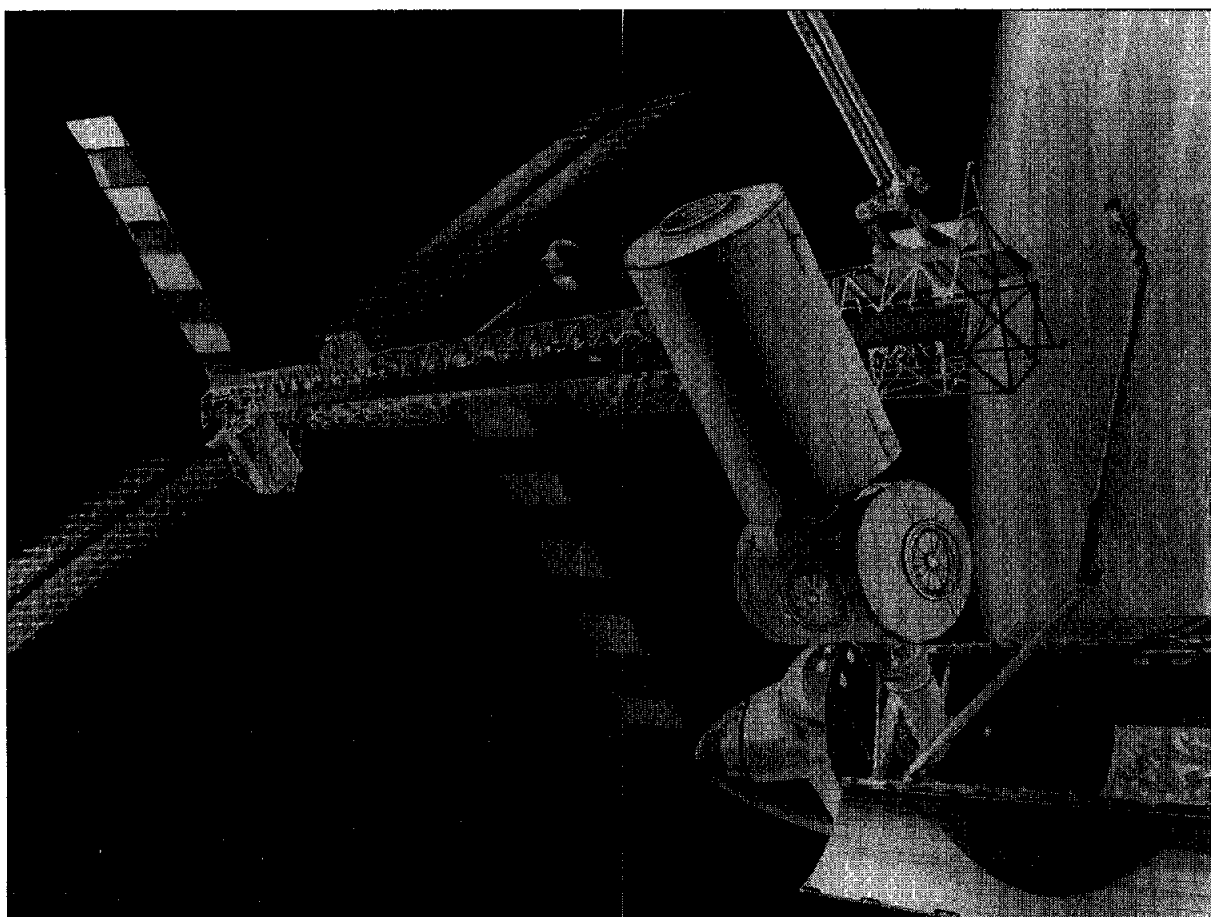
Attached to the WSF will be a series of experiments to help study this "space wake" and the effects it has on them. One of these experiments will use the shuttle thruster jets to "plume" or fire in the direction of the WSF to understand how the jet firings affect other spacecraft. This is important in determining what protective measures need to be addressed for the space station since the shuttle will rendezvous with the orbiting laboratory up to four times a year later this decade.

A Russian cosmonaut will be among the crew members aboard *Discovery* for STS-60. A series of medical evaluations will further investigate the adaptation of the human body to space flight as well as readaptation to the Earth environment. These joint experiments with Russia will study spatial orientation, neurosensory, sensory-motor and perceptual functions, equilibrium control and eye response tests during and after the flight.

STS-61 — DECEMBER

The final mission of 1993 highlights the first servicing mission to the Hubble Space Telescope. Three space walks are planned with provisions for two more to repair and service the HST launched in April 1990 aboard *Discovery*. The work scheduled, as well as the number of space walks, will provide further data for those required during the space station era for experiment monitoring and changeout as well as for maintenance.

Other space station precursor experiments are being evaluated as smaller scale experiments for several of the flights scheduled this year. □



Sollock, Coblentz head Flight Data Systems

Paul E. Sollock has been appointed chief of Engineering's Flight Data Systems Division, succeeding Irvin Burtzloff, who retired recently.

Sollock had been deputy director since the new division was created in 1990, and Richard E. Coblentz replaces him in that capacity.

Sollock joined JSC in 1962 as a cooperative education student and upon graduation in 1965 was assigned to the Hybrid Computation and Simulation Branch of the Guidance and Control Division. After serving as the general purpose computer subsystem manager, Sollock became a section head, branch chief and deputy chief of the Avionics Systems Division.

Coblentz joined JSC in the

Recovery Electronics Branch of the Landing and Recovery division. He has served head of the Reconfiguration Systems Section in the Flight Support Division, chief of the Systems Development Branch and

JSC

People

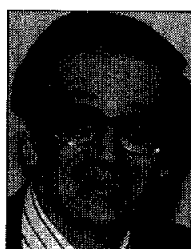
assistant chief of the Space Station Spacecraft Software Division. Coblentz became manager for space station in the Flight Systems Division in 1990, and later was named chief of the Space Station Data Systems Branch.

Lisenbee, Buchta earn top secretary honors

Carolyn S. Lisenbee and Sylvia A. Buchta recently earned the Marilyn J. Bocking Award for Secretarial Excellence.

Lisenbee, secretary and assistant to the manager of Work Package 2 in the Space Station Projects Office, was cited as "the calm in the storm" of the project manager's ever-changing schedule to support the dynamic and critical nature of Work Package 2 in the Space Station Program.

In addition to normal secretarial duties such as coordinating meetings, correspondence, messages and dealings with the prime contractor senior management, she also



Sollock



Coblentz



Lisenbee



Buchta

directs the efforts of the 15 secretaries supporting the project office and serves on the Space Station Freedom Program Secretarial Council, which seeks to improve consistency and communication within the program.

Buchta, secretary to the deputy director of Engineering, is responsible for performing secretarial, clerical and administrative support

duties. She was cited for her knowledge of JSC operating policies and contacts, which she has used to help the deputy director and his administrative officer increase their productivity.

In addition, when the director's secretary position was vacated during a particularly busy time, she assumed those duties and eliminated any impact from the loss.

New ethics rules come with training

(Continued from Page 1)

Examples of "non-gifts" are the offer of modest food and refreshment items such as soft drinks, coffee and donuts; favorable rates and discounts made available to the public or all government employees; greeting cards and items of little intrinsic value such as plaques, certificates and trophies; and, awards and prizes given in contests or events such as random drawings where entry is open to the public and not required as part of your official duties.

OGE also has created a set of exceptions to the rule prohibiting gifts from contractors or those seeking to do business NASA.

There are fewer exceptions but the exceptions are broad enough to incorporate most of the NASA gift exceptions that you are familiar with, Remington said, and a couple are worth expanding upon.

Under the "de minimis" exception, you may accept an unsolicited gift (other than cash or investment interests) with a retail value of \$20 or less. The previous NASA exception applied only to unsolicited promotional items, such as pens, pencils and calendars, with a retail value of \$10 or less. The new exception does have a cumulative cap of not more than \$50 from any one source in a calendar year.

Another new exception allows you to accept a gift that arises from your outside business activities, or the business activity of your spouse, that are not offered because of your official government position, for example, a Christmas or New Year's party provided by the spouse's employer. The previous NASA exception covered only the spouse's acceptance of a gift from the spouse's employer.

Other issues in the new regulations that are not addressed in the Yellowbook include: disqualification in certain situations of former contractor employees on matters affecting their former employers in the first two years of their JSC employment; new restrictions on seeking post-government employment while you are still a government employee; restrictions on being compensated as an expert witness for someone other than the federal government; and new rules regarding fundraising in your official capacity.

An overview of the new standards of conduct will be provided in the 1993 ethics training course. The annual training will start in March, and be presented by a professional instructor. The 2 1/2-hour course will be presented in the Bldg. 30 auditorium to about 120 employees at a time. A JSC attorney will be present to answer questions at all training sessions. All employees required to receive such training will be notified by the JSC Training Office about three weeks in advance.

If you have any questions about the new regulations or the training course or schedule, contact the JSC Legal Office at x33021.



JSC Photo by Jack Jacob

Chief Astronaut Hoot Gibson, right, joins family members in welcoming home STS-54 Mission Specialist Greg Harbaugh at a chilly Ellington Field. Harbaugh and his wife, Carol, are holding younger daughter, Dana, as the eldest, Kelly, sends up her welcome. Rain drenched the area of Hangar 990 as family, friends and coworkers waited for the crew to arrive from Kennedy Space Center, but diminished to a light drizzle by the time the astronauts arrived.

STS-54 crew lauds shuttle, team

Enjoys teaching through physics demonstration

(Continued from Page 1)

brought this about," he said. "Those of you here that represent some aspect of making this all possible. I sincerely hope that what we have accomplished has made you proud."

Pilot Don McMonagle talked about the mission's accomplishments.

"We did some DXS data which is looking far into the future, looking at astrophysics and saying this is what we need to understand about our galaxy," he said. "We did some work in infrastructure development for the continued operation of the space shuttle and space station. We put up a TDRS satellite, a communications platform, and we learned a lot about how to do EVAs that are going to be necessary for space station."

"In the process, we also did something about trying to make sure there's a next generation someday that will take the reins from all of us operators and engineers out here who are continuing this space explo-

ration program.

"By talking to children and teaching them about how physics work from a perspective that they can use and understand, I think we went a long way toward perpetuating continued development of space adaptation and space operations and hopefully space flight beyond Earth orbit in their generation."

Mission Specialist Susan Helms also praised the crew, but ended her comments on a humorous note.

"I couldn't have flown with a finer crew as a rookie," she said. "Not only were these guys the best buds someone could have as a new person being guided and trained on what space flight's all about, but they even put the toilet seat down, too."

The STS-54 crew members will share their experiences with fellow employees at a briefing Feb. 2. The presentation, complete with photographs, film and videotape from the mission, will begin at 10 a.m. in Teague Auditorium.

Spectrometer links x-rays to supernova

(Continued from Page 1)

nary data from the Diffuse X-ray Spectrometer have obtained the first direct evidence that mysterious X-rays from deep space emanate from clouds of invisible gas.

The clouds of ionized, extremely hot gas, many scientists believe, were produced long ago by cataclysmic supernova explosions.

Using two NASA-University of Wisconsin detectors, astrophysicists from the University of Wisconsin-Madison sampled faint X-rays that appear to be a signal from a supernova event that occurred in the vicinity of our solar system.

Since the beginning of X-ray astronomy in the early 1960s, scientists have puzzled over the origins of the low-energy X-rays that emanate

from seemingly empty space, including a huge region around our solar system.

If scientists' ideas of how these enormous pockets of superheated gas came to be correct, then the signal detected by DXS may be coming from gas heated by the blast wave of a supernova, said Dr. Wilton Sanders of the University of Wisconsin-Madison, DXS' principal investigator. Scientists are continuing to look at the data, he cautioned.

That supernova likely created a pulsating star known as Geminga as well as an expanding pocket of superhot X-ray emitting gas that now surrounds our solar system and extends for several hundred light years in all directions.

Recent observations from the

German-American X-ray satellite ROSAT and NASA's Compton Gamma Ray Observatory identified Geminga as a pulsar, a very dense, rapidly rotating species of star associated with supernova events.

"What we are seeing is like an echo from the past," said Sanders. "For 30 years, scientists have speculated about the origins of these X-rays and now this echo, these faint X-rays that we're looking at, are starting to give us some answers."

"We're looking at objects that are so hot they glow in X-rays," Sanders said. "They're hotter than white hot, they're hotter than blue hot. They're X-ray hot, and that means that the temperatures of these clouds is something on the order of a million degrees."

JSC Fellowship applications due by end of March

Those wishing to take advantage of educational opportunities have until March 26 to apply for the JSC Fellowship Program.

Under the JSC Fellowship, the center will sponsor a select number of individuals to attend graduate school on a leave with pay basis for one year.

Criteria used for selections include the applicability of the chosen area of study and its effectiveness in contributing to the achievement of JSC's mission and goals; a brief statement of academic purpose, prior academic courses completed, the written recommendation of the division chief and the level of activity in the employee's office.

Typically, those selected will have at least three years of service at JSC which may include co-op time. Review of the candidates for the JSC Fellowship will be made by a center panel of senior managers with the final selection to be made by the center director. While application and acceptance to the graduate school is the responsibility of the applicant, tuition and fees, except travel, will be paid by JSC.

Regular service agreement requirements entailing a period of three times the length of the training will apply to the program. Interested employees should request an application from Laura Goerner, x33067, and should contact their training coordinators for directorate-specific guidelines.

Completed applications, accompanied by written recommendations from the division chief, should be forwarded to Paige Maultsby in the Human Resources Development Branch no later than March 26.

Picnic planners looking for this year's theme

Plans are coming together for this year's JSC Picnic, but one important aspect still has to be decided — a theme.

The JSC picnic committee is conducting its theme contest for the annual event set for May 1. Anyone who wants to enter should submit their suggestions to Dorothy Rasco, Mail Code JD4, by Feb. 12. Participants are limited to three entries per person.

Past themes have included "A Family Endeavor," "JSC Proud," and "Back to the Future."

Winners will receive a savings bond and two tickets to the picnic. For more information, call Nation at x33152.

Space Center Houston hours

Space Center Houston has instituted new, shorter weekday hours that will be in effect throughout the winter season.

"The Closest Thing to Space on Earth" will open at 10 a.m. and close at 6 p.m. on weekdays, but will continue to open from 9 a.m. to 7 p.m. on weekends.

Discount passes and annual passes are available at the Bldg. 11 Exchange Store.

Space News Roundup

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Editor Kelly Humphries
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