

# Space News Roundup

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No. 1

## Ethics reforms affect federal employees' lives

By Kari Fluegel

Ethics reforms that have swept through Congress now are making an appearance in the lives of all federal employees.

As an example, on Jan. 1 the Ethics Reform Act of 1989 instated prohibitions on government employees from receiving compensation in the form of money or anything of value for making appearances or speeches or for writing articles on any subject, said Hank Flagg, JSC chief counsel.

The regulations are not limited to work-related topics, Flagg said. Receiving honoraria for writing or speaking about outside interests or hobbies is prohibited.

As examples, an engineer cannot accept an honorarium for giving a presentation about fishing nor can a procurement officer accept compensation for writing an article about training dogs.

Flagg said the scope of the new ethics reform statute is extremely

broad and that it is a difficult document to interpret. The original act was 68 pages long and has had 14 pages of amendments since it was passed in 1989.

Flagg said the honorarium reform is directed primarily at one-time events or appearances. Accepting a salary or other compensation from an employer, such as individuals with outside teaching assignments, is not prohibited, and the authorship of books is not affected.

Employees can request, however, that any honoraria—not to exceed \$2,000—be donated to a charitable organization if neither that individual nor specified family members derive any benefit from the organization. These donations do not carry any tax burden for the speaker or writer, but also cannot be used as a deduction on income taxes. Previously, the speaker or writer would carry the donation as a liability on his or her taxes.

The penalty for violating the ethics

rule could result in a fine up to \$10,000 or the amount of the honorarium, whichever is greater, Flagg said.

According to the Office of Government Ethics, efforts to narrow the honoraria prohibition will be a subject of debate in Congress this year.

The Ethics Reform Act of 1989 also makes some amendments to post-employment restrictions and provides a tax rollover for divestment of financial interests required to avoid a

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## Shuttle work resumes after holiday break

By James Hartsfield

Following a holiday break to allow maintenance work on Kennedy Space Center's processing and launch facilities, power was turned on aboard *Discovery* and *Atlantis* this week and preparations for upcoming missions resumed.

Electricity was turned on to *Discovery* on Wednesday afternoon in Bay 1 of the Orbiter Processing Facility. Immediately afterward, the spacecraft's payload bay doors were opened. Work planned for the week included a high-pressure helium test of the main propulsion system and installation of the forward reaction control system.

In high bay 1 of the Vehicle Assembly Bldg., the external tank and solid rocket boosters that will be attached to *Discovery* for STS-39 are mated. Close outs of the SRBs and tank stacking are under way.

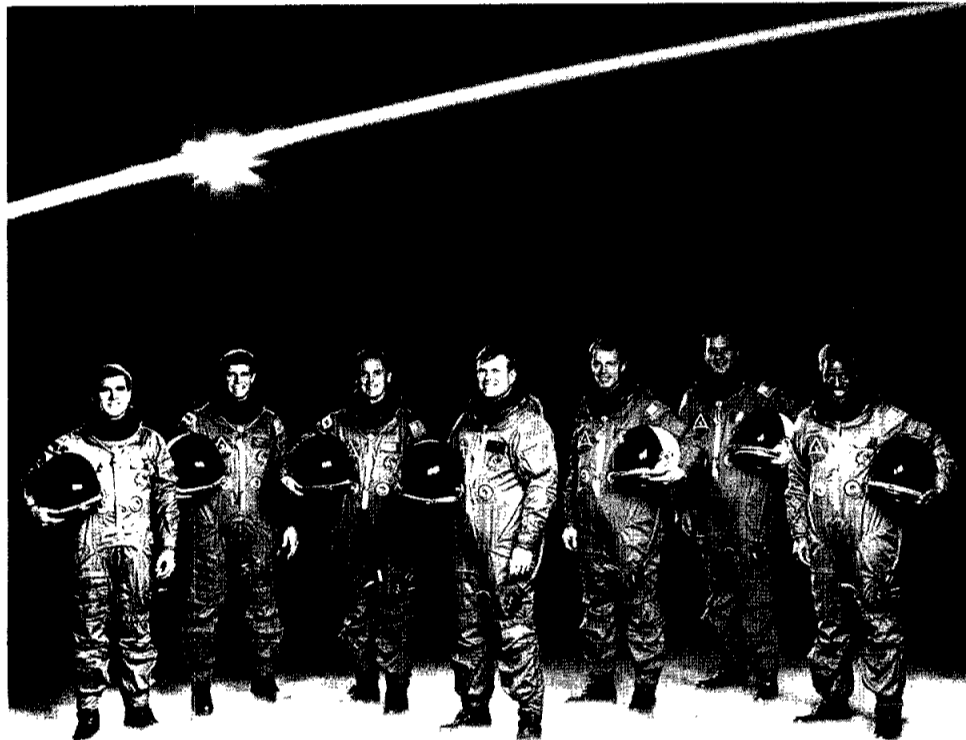
Preparations for STS-39 are ahead of schedule and may allow a launch in late February rather than in early March if they continue to go smoothly.

*Atlantis*, in OPF Bay 2, is to be powered up today. The payload bay doors will be opened afterward and the remote manipulator system, or robot arm, will be installed. The arm will be used to deploy the Gamma Ray Observatory on STS-37 in early April.

With power off this week, the five general purpose computers on *Atlantis* were replaced with advanced models, half as large but with more than twice the memory and three times the computing speed of the original models. The first flight of the new on-board computers will be aboard *Discovery* on STS-39.

Also, auxiliary power unit 2, one

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JSC Photo by Scott Wickes

STS-39 crew members, wearing their partial pressure launch and entry suits, line up for their official portrait. The double exposure utilized an actual Earth-limb photograph and man-made ground "fog." From left are Mission Specialists Lacy Veach, Don McMonagle, Greg Harbaugh, Commander Mike Coats, Pilot Blaine Hammond and Mission Specialists Richard Hieb and Guy Bluford.

## Space station design review ends on time

The year-long Integrated System Preliminary Design Review for Space Station *Freedom*, a major milestone on the road to its construction, launch and assembly, was completed on schedule last week.

Every major component, subsystem and system was examined over the course of the past 13 months. More than 80 separate design reviews were conducted at JSC, other NASA centers and contractor facilities to ensure *Freedom*'s preliminary design could satisfy requirements for safety, physical and functional compatibility, construction, integration with other hardware and testing.

"We did it," said Marc Bensimon, deputy manager for *Freedom*'s Program and Operations Office in Reston, Va., who headed the ISPDR effort. "We established the schedule for the PDR last April and we met every milestone as planned."

"This was an outstanding effort," said Robert Moorehead, deputy director for Space Station *Freedom* Program and Operations. "Not only did we accomplish the PDR on schedule, we made the schedule despite having to devote a lot of time and attention to other issues, like weight and power and EVA (extravehicular activity) resources."

Preliminary figures for *Freedom*'s weight as of June 1990

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## JSC to host Total Quality Management colloquium

JSC will host its first agencywide Total Quality Management Colloquium on Tuesday, featuring the head of the Houston-based American Productivity and Quality Center.

Dr. C. Jackson Grayson, chairman and chief executive officer of the center, will discuss TQM as the national imperative and focus of organizational change.

The colloquium, which will be from noon-1:30 p.m. in the Bldg. 30 auditorium, is the latest in a series of TQM seminars presented by NASA Headquarters for the entire agency. JSC's Television Distribu-

tion System will carry the discussion live on Channel 4 and a special viewing room will be provided in Bldg. 16, Rm. 259.

Grayson founded the American Productivity and Quality Center after serving as the chairman of the United States Price Commission, which administered price-wage controls in the early 1970s. During his work with controls, Grayson said he became aware of how important productivity is to the well being of the country, how American productivity growth had begun to slow and how competition from abroad had become

increasingly challenging. He formed the non-profit center to alert the nation and work on the problems.

Grayson, a certified public accountant and graduate of Tulane University, Wharton School of Business and the Harvard Business School, has held professorships at Harvard, Stanford, Tulane and SMU and has been dean of the business schools at Tulane and SMU.

He also is a member of the board of directors of Sun Co., IC Industries, Pottlatch Corp., Tyler Corp., Harris Corp., Dallas Corp., Browning-Ferris and First City Bancorporation in

Houston, and the author of three books, the latest with Carla O'Dell, entitled "American Business: A Two-Minute Warning."

TQM is a set of principles, processes and techniques designed to involve all employees from the top down in a concerted effort to improve the quality of an organization's products, services and processes.

A TQM steering committee established by JSC Director Aaron Cohen is formulating an implementation strategy that will have as its goal a tenfold increase in the center's quality and productivity by 1995.

## Silver Snoopy wags tail for outstanding workers

Twenty-three JSC civil service employees have received their coveted Silver Snoopy Awards in recent weeks.

The awards, presented by astronauts to less than 1 percent of the total NASA and contractor work force each year, signifies outstanding contributions to NASA's flight safety and mission success.

Receiving silver Snoopy lapel pins and certificates of appreciation were: Joseph Rogers, Information Technology Division; Ann Sullivan, Space Shuttle Procurement Division; Pete Strahl, Management Services Division; Carol Smith, Security Division; Fred Burns, Flight Support Equipment Office; Jim McBarron II, Crew and Thermal Systems Division, Lt. Col. Rusty Roe, Customer Integration

Office; Tom Allen, Reconfiguration Management Division; and Louis Hackney, Space Shuttle Ground Systems Division.

Other award winners included: Troy Heindel and Richard Fullerton, Systems Division; Lis Menning, Training Division; Brian Perry and Jeff Bertsch, Flight Design and Dynamics Division; Gail Schneider, Operations Division; Claudette Gage, Medical Sciences Division; Vickie Kloeris, Man-Systems Division; Beverly Cox, Facility Development Division; Jim Kelley, Tracking and Communications Division; Kirk Shireman, Navigation Control and Aeronautics Division; Elizabeth Bains and Larry Walter, Automation and Robotics Division; and Al Alcantar, Orbiter Projects Resident Office, Downey, Calif.



NASA Photo

**AN ALIEN'S VIEW**—This near-infrared photograph of Earth taken by the Galileo spacecraft shows what extraterrestrials approaching Earth might see. It was taken Dec. 11 at a distance of 1.32 million miles as Galileo flew by Earth for a gravity assist.

## No smoking policy goes into effect

It's official. JSC now has a smoke-free interior environment.

The no-smoking policy inside JSC buildings and government vehicles went into effect quietly over the New Year's Day holiday.

JSC Director Aaron Cohen put aside his pipe and cleaned out his ashtrays on Monday, a day before the Jan. 1 no-smoking deadline arrived.

"We don't expect any problems with implementing this change," said Harvey Hartman, acting director of Human Resources. "It's a little bit like any other work rule. Generally our people treat those like adults and are responsive to them and we think they'll see this one in the same way."

Openings are available in the second JSC Smoking Cessation Class that begins Jan. 10 for JSC civil servants, contractors and their spouses who want to quit. The eight-week class will be offered by the Human Resources Office from 11 a.m.-noon every Thursday through Feb. 28 in the Gilruth Center, Rm. 206.

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**JANUARY** — Seven JSC scientists began 1990 examining the Long Duration Exposure Facility. LDEF, with 57 experiments, spent almost six years in space before the STS-32 crew retrieved it in January 1990. ▲



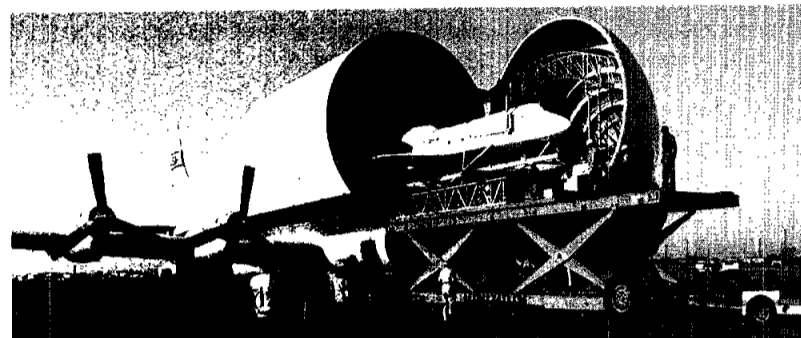
**JULY** — Twenty-three members of the 1990 astronaut candidate class reported to JSC to begin a year of training and evaluation. The 1990 class includes Air Force Maj. Eileen M. Collins, the first female pilot candidate, pictured here during parachute drag training. ▲

# 1990: Dawn of a Decade

**FEBRUARY** — The Lunar and Mars Exploration Program Office was established at JSC. JSC Director Aaron Cohen implemented a significant reorganization, moving several Mission Support Directorate responsibilities to the Mission Operations and Engineering directorates, reorganized New Initiatives, and created the Information Systems Directorate. ▶



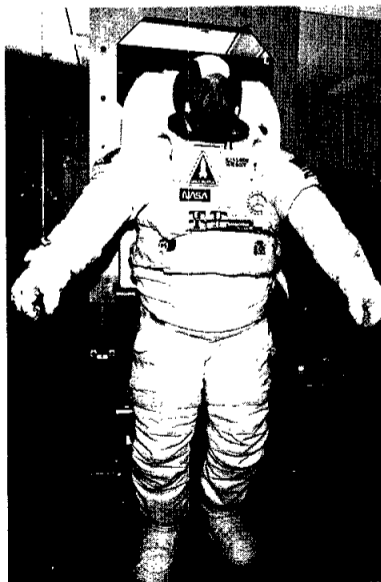
**AUGUST** — Several Desert Shield support groups toured JSC this fall during breaks in their work schedules. About 10 JSC civil servants are among the military personnel en route or working in support of the Desert Shield operation. ◀



**MARCH** — JSC became home to a one-fourth structural scale model orbiter designed and built by Rockwell in 1974. The model now is housed in the Bldg. 49 Vibration and Acoustic Test Facility. ▲



**APRIL** — The JSC Child Care Center opened its doors in late April to 54 children. The 3,600 square-foot center, which took about six months to build, can accommodate 62 children. Operational funding was generated by donations and tuition. Much of the finishing work on the center was done by parents and volunteers. This year work also was completed on a new auxiliary chiller facility also known as Bldg. 28. ▲



**MAY** — Soviet Cosmonaut Aleksandr Serebrov dons a NASA space suit during his May visit to JSC's Bldg. 7. Serebrov said the wrist joints on the U.S. suit will turn, something the Soviet suit won't do. ▶



**OCTOBER** — Construction at JSC moved into high gear as work began on expanding buildings 5, 9A and 30. This photograph shows the raising of the first truss in the Bldg. 9C construction this fall. In October, construction began on a new gymnasium and foyer for the Gilruth Center. ▲

**SEPTEMBER** — JSC Director Aaron Cohen announced the center would provide a smoke-free environment beginning Jan. 1. ◀



**NOVEMBER** — A new Shuttle Carrier Aircraft stopped at Ellington Field en route from Wichita, Kan., to El Paso. The modified Boeing 747, christened NASA 911, joins its sister ship NASA 905 which has ferried all the space shuttle orbiters from California to Florida since the shuttle program's inception. ▲



**JUNE** — JSC Director Aaron Cohen, responding to employees' desires for more time to discuss issues with senior managers informally, began a periodic Center Director's Forum. The forum resulted from needs identified in the 1989 JSC Culture Survey. ▲



**DECEMBER** — U.S. Secretary of State James Baker and then Foreign Minister of the Soviet Union Eduard Shevardnadze, who were in Houston for a week of diplomatic talks, toured the Space Station Freedom and space shuttle mockups, and Mission Control Center. While in the MCC, both diplomats talked with the STS-35 crew. Shevardnadze since has resigned his post. ◀



## Hartman directs Human Resources

Harvey L. Hartman has been named acting director of Human Resources at JSC, overseeing the center personnel program and a staff of about 60 employees.

He takes over for Jack Lister, who retired Nov. 30 after 22 years as the center's senior human resources executive.

Hartman, who joined JSC in 1966, had been deputy director of Human Resources since 1976, and director of Human Resources Development since 1985. Prior to that, he had been chief of the Personnel Management Branch and a group leader in the personnel operations area.

He has been chairman of JSC's Exchange Council since 1984 and is a member of the board of directors of the Manned Space Flight Education Foundation Inc., the non-profit organization that is developing Space Center Houston, the new JSC visitor center.

### Hammersley new chief of Technical Services

Vernon C. Hammersley Jr. has

been assigned as chief of the Technical Services Division in JSC's Center Operations Directorate, effective Jan. 13.

Hammersley, who had been deputy chief of the Automation and Robotics Division in the Engineering Directorate, replaces J.D. Williams, who retired in November.

He has been chief of the Mockup and Trainer Section and of the Facilities Operations Branch in the Space and Life Sciences Directorate.

### GNC/IPS team earns plaque hanging honors

The Guidance, Navigation and Control/Instrument Pointing System team recently earned the honor of hanging the STS-35 plaque in the Mission Control Center.

Flight Director Al Pennington said Team Leader Ken Bain was asked to hang the plaque, but that he passed the honor to Will Fenner because Bain's left arm was in a cast.



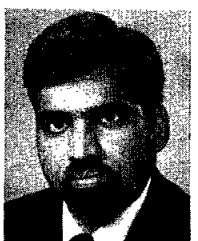
Hartman



Hammersley



Bain



Lulla



Davison



McDaniel



Parnell

"The whole team was honored for its outstanding performance in coming up with a way to command the IPS to operate from the ground when we didn't have plan to do such a thing," Pennington said.

JSC

## People

Both Bain and Fenner are Rockwell Space Operations Co. employees.

### Lulla gets award from Indian center

Kam Lulla of JSC's Flight Science Support Office recently received the 1990 India Culture Center's Outstanding Professional Award.

Lulla prepares astronaut briefings and training on Earth observations and remote sensing.

The award, which recognized his professional accomplishments in science and space technology, is given annually by the ICC, an umbrella organization for American citizens of South Asian origin.

### Trio receives top secretarial honor

Marilyn Davison, Merrell McDaniel and Judy Parnell recently received the Marilyn J. Bocking Award for Secretarial Excellence.

Davison provides secretarial support to the manager of the Technology and Commercial Projects Office in the New Initiatives Office. She was cited for creating the administrative procedures for the office, established in 1988, and for improving the

effectiveness and efficiency of the office's many work elements.

McDaniel is secretary to the Information Resources Management Services Office in the Information Systems Directorate. She was cited for her ability to adapt to the newly formed directorate's structure, and for supporting two office chiefs for several months pending the physical relocation of personnel.

Parnell is secretary to the deputy manager of the Space Shuttle Program. She was recognized for her knowledge of the Space Shuttle Program, its major milestones and the matters of importance associated with meeting those milestones, and for efficiency in dealing with complex calendar and travel scheduling and arrangements.

Each secretary was presented with a plaque, and will receive a \$500 stipend.

## NASA extends Flight Equipment Processing Contract

NASA has extended its Flight Equipment Processing Contract with Boeing Aerospace Operations through Nov. 30, 1993. The value of the three-year extension is \$103.4 million, increasing the current contract value to \$210.3 million.

Boeing was first awarded the contract in December 1985. The cost-plus-award-fee contract also includes options that would extend the performance period to Nov. 30, 2000. The potential total value of the contract is \$492.1 million.

The contract covers processing and preparation of astronaut flight equipment for space shuttle missions and astronaut crew training, including the management, operation, testing and modification of specific equipment. Most of the work on the contract is performed at Boeing's Houston facility.

### Picnic meeting set

The JSC Picnic Committee will kick off planning for its 1991 event from 4:30-6 p.m. Tuesday in the Gilruth Center, Rm. 204.

Anyone who is interested in serving on the committee is encouraged to attend the meeting or call Ginger Gibson at x33216 or Melody Goss at x33152.



JSC Photo by Kim Murray

**FLYING LOW**—A crowd of employees stands outside JSC buildings as *Columbia* flies overhead, perched atop its Shuttle Carrier Aircraft. The fly over at about 2,000 feet occurred as *Columbia* was returning to Kennedy Space Center on Dec. 19.

## Work resumes on processing shuttle fleet

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of three such units that pressurize and power the shuttle's hydraulics, was installed, and new carbon brakes were put in to replace *Atlantis*' original beryllium brakes.

Work on the SRBs for *Atlantis* and STS-37 is under way in high bay 3

of the VAB.

Meanwhile, *Columbia* is stored in high bay 2 of the VAB, awaiting a spot to open up in the processing facility. Purges of residual fuels are under way on *Columbia*, and it will remain in the VAB until *Discovery* is rolled out of OPF Bay 1 late this

month.

NASA will add a fourth spacecraft to the current fleet when *Endeavour* is delivered this year. Work on *Endeavour* at Rockwell's Palmdale, Calif., plant is on schedule for a delivery of the new orbiter to KSC in early May.

## Space station design matures, converges

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were 143,000 pounds higher than the allocated limit of 512,000 pounds for the total space station, and house-keeping power exceeded the maximum 45 kilowatts available by nearly 15 kW. An intensive summer-long resources scrub reduced weight estimates by 130,000 pounds and reduced the housekeeping power by 13 kW. Users will receive 30 kW of power to conduct their experiments.

Despite the added rigors of the ISPDR review progress, weight and power levels have remained stable.

"What this means is that the design is maturing and converging," said Bensimon. "While a PDR is typically conducted with the hardware only 10 percent designed, I was impressed with the detail of the preliminary design and the knowledge our systems managers displayed with

respect to expected performance of their systems."

While hardware was a major focus of the ISPDR, space station managers also reviewed and baselined ground processing procedures, computer software specifications and pre-flight verification plans for *Freedom*.

They also approved design modifications such as those suggested by JSC's Dr. William F. Fisher and Charles R. Price, co-chairs of the External Maintenance Task Team. In the EVA systems area, program managers approved a change that would provide a handle on all external orbital replacement units so that those components could be replaced by robots as well as humans.

Both Moorehead and Bensimon acknowledge the current restructure assessment (begun in November as a result of a 1991 fiscal year budget

shortfall of more than \$550 million along with a Congressional mandate to significantly reduce out-year spending) will have an impact on the design but are confident that the ISPDR has laid a firm foundation for the restructuring.

"Certainly there will be design changes," said Moorehead, "but I think that from a systems and sub-systems standpoint, the ISPDR configuration provides us with an excellent baseline to work from for the restructuring. After all, regardless of what *Freedom* will look like from an overall configuration standpoint, we will still have to have systems like power, thermal control, data management and guidance and control. I anticipate being able to use a significant proportion of those systems in the station that comes out of our restructure assessment."

## Two cost-cutters earn large awards

JSC Director Aaron Cohen presented two large awards in December for suggestions that reduced some costly shuttle software verification and kept the Bldg. 1 ceiling from being replaced.

Scott A. Seyle received a \$3,465 award for an "OPS 4" system management plan that omits the need to verify a piece of shuttle computer programming when that software is inhibited for a specific flight.

Gary D. Wessels received a \$4,400 award for pointing out that workers could install a sprinkler system above Bldg. 1's first floor ceiling without replacing the ceiling. Wessels located a scaffolding system that gave workers the needed access between the ceiling and second floor.

Cohen also presented Patent and Tech Brief Awards to seven JSC workers, and gave four others Antarctica Service Medals.

Two Patent Awards went to David A. Wolf for a Three Dimensional Cell

to Tissue Assembly Process and a Three Dimensional Co-Culture Process.

Tech Brief Award went to Wolf for Biologically Active Factors Produced by Multicellular Co-cultivation, High Aspect Culture Vessel and Three Dimensional Co-Culture Process, Glen F. Steele for a CCSDS Audio Signal Processor, Christopher W. Brown, for a Two Fault Tolerant Toggle-Hook Release, Leslie J. Quiocho for Dynamic Modeling of 6N Degree-of-Freedom Robotic Manipulator Systems, Mark E. Rorvig for a General Machine Image Pattern Classifier, Richard L. Sauer for a Biocide Source/Sink for Microbial Control of Stored Potable Water, and Harold Reimers for a Universal Quick Disconnect Attachment Mechanism.

Cohen presented the Department of the Navy/National Science Foundation Antarctic Service Medal to James E. Ratliff, Patrick M. O'Neil, Pedro A. Martinez and Rafael E. Munoz.

## Society plans trip to view eclipse

The JSC Astronomical Society is organizing a trip to observe a total eclipse of the Sun in Mexico July 9-12.

The eclipse will be the longest for the rest of the century when the Moon passes in front of the Sun shortly after noon on July 11, blocking its light for nearly seven minutes.

Amateur astronomers from eight

states and three foreign countries already have signed up for the trip. Participants will spend three nights in Puerto Vallarta and travel by bus to the city of Tepic on eclipse day. JSC employees and their families who would like to make the trip should contact Paul Maley at x34636 or 488-6871 as soon as possible. Space is limited.

## Ethics reforms in effect

(Continued from Page 1)

conflict of interest, Flagg said. For most employees, the impact of the amendments to post-employment restrictions probably will be negligible. While there are some new restrictions, they are aimed largely at senior government officials and will not affect most employees, Flagg said.

The added post-employment restrictions provide for a one year cooling-off period for "very senior" employees such as those at the cabinet level and a one year cooling-off period from advising or representing foreign governments for senior and very senior employees.

Also as of Dec. 1, the suspension of certain procurement integrity guidelines has been lifted and some new guidelines added. The new guidelines spell out procedures for recusal or withdrawal from involvement with a particular procurement; provide clarification of post-employment restrictions regarding sub-contracts; and provide procedures for both former and current employees contacting an agency ethics official and requesting ethics advice.

For additional details regarding ethics rules, employees should call the JSC Legal Office at x33021.

## Smoker's Diary reprints available

(Continued from Page 1)

The class, very successful in its first session, is taught by Dr. Larry Laufman of the Institute for Preventive Medicine at Methodist Hospital. JSC covers all costs, except for a \$50 registration fee that is refunded if the participant attends seven of the eight classes. For details,

call Beth Hall at x33078.

Space News Roundup is offering reprints of the eight-part "Smoker's Diary" series, which chronicled Brian Welch's participation in the class. To receive a copy, stop by Bldg. 2, Rm. 147, or send a self-addressed inter-office envelope to Smoker's Diary, AP3.