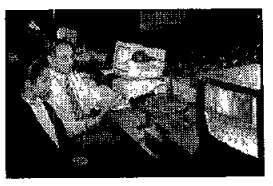
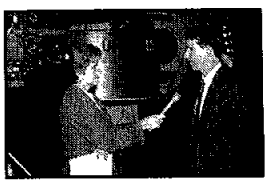
National Aeronautics and Space Administration
Lyndon B. Johnson Space Center
Houston, Texas



Exploring two worlds

Students participating in the Jason Project explore Hawaiian volacanoes and the universe. Story on Page 3.



ASCANS arrive

The 1995 Astronaut candidate class arrived this week to begin extensive year long training. Photo on Page 4.

Space News Roundup

Vol. 34 **March 10, 1995** No. 10

Nagel moves to SR&QA

By Kyle Herring

Astronaut Steven Nagel has retired from the Air Force and moved from the Astronaut Office to take the position of deputy director for operations development in the Safety, Reliability and Quality Assurance Directorate effective March 1.

"It's a big move," Nagel said. "I thoroughly enjoyed my 16 years as an astronaut, it was a great privilege to fly on the shuttle."

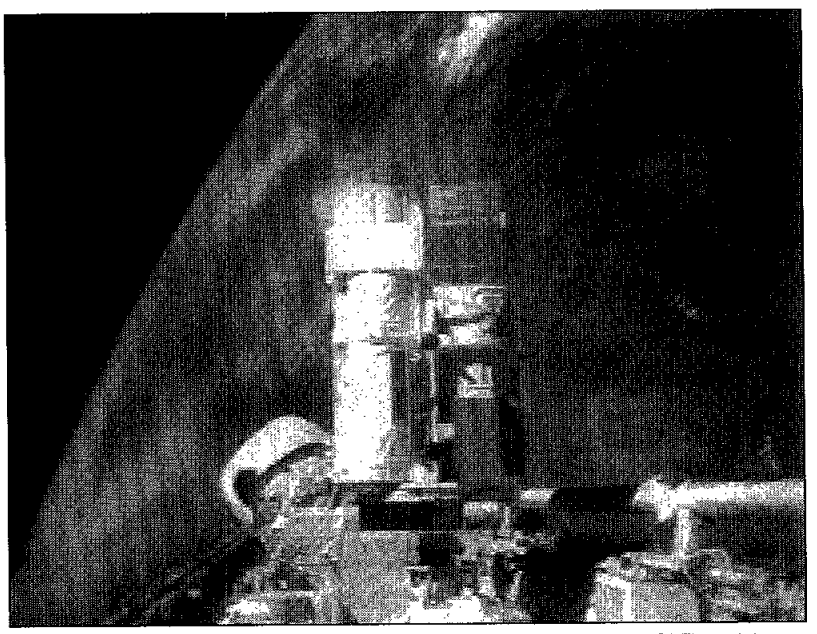
As deputy director, Nagel will be in charge of shuttle safety and quality operations. "I am happy to be working with the shuttle program," he said. "I know it best, and the future holds some interesting and challenging work."

"Nagel

In addition to serving on four shuttle flights, Nagel supported the Astronaut Office as a spacecraft communicator in mission control during some missions; the prime liaison with other organizations on the development of a crew escape system for the shuttle and represented the Astronaut Office on shuttle flight software verification.

Nagel's four shuttle missions included STS-51G in June 1985 when three satellites were deployed. His second was STS-61A in October 1985, the first Spacelab mission dedicated to Germany .

The STS-37 mission in April 1991, Nagel commanded the deployment of the Gamma Ray Observatory. His final mission was STS-55 in April 1993, the second German Spacelab mission.



NASA Electronic Images

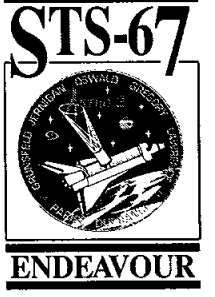
Top: As the space shuttle Endeavour hovers over the Earth, the astronauts were able to capture visions of South Africa from the orbiter. Bottom: STS-67 Pilot Bill Gregory practices for the end of the record-breaking 15 1/2 day mission with the landing simulator.

Astro-2 captures cosmic volcanic eruption on Io

By Rob Navias

"It seems like old times."

Those words, uttered by veteran Payload Specialist Sam Durrance aboard *Endeavour* as he settled in on orbit for the second time in a little over four years, set the stage for what is expected to be a shuttle-record 15 1/2 day mission to study the ultraviolet light emitted from distant galactic objects using a suite of telescopes named Astro-2.



Durrance is no stranger to the Astro-2 payload, having flown with the telescopes on the STS-35 mission aboard *Columbia* in December 1990, along with crewmate and fellow astronomer Ron Parise. Both are back aboard *Endeavour*, conducting round-the-clock studies of hot stars, globular clusters, quasars, white dwarfs and other astronomical phenomena.

The second shuttle mission of the year began with a sky-lighting blastoff from the Kennedy Space Center at 12:38 a.m. CST Thursday. Within hours after reaching orbit, Commander Steve Oswald, Pilot Bill Gregory, Payload Commander Tammy Jernigan, Mission Specialists Wendy Lawrence and John Grunsfeld and Payload Specialists Durrance and Parise began to activate the European-built Instrument Pointing System on which the trio of telescopes is mounted. Then, Jernigan, Grunsfeld, Durrance and Parise took turns bringing the telescopes to life as well as focusing and aligning them. After almost a full day of work to prepare and fine-tune the instruments, the Astro-2 payload was ready to study distant starlight.

"The activation of the telescopes went as we had expected and hoped for," said Astro-2 Mission Manager Dr. Robert Jayroe at the Payload Operations Control Center at the Marshall Space Flight Center.

"Now we're collecting data and everything is looking good."

In the early days of the marathon mission, the astronauts trained the Astro-2 telescopes toward deep space to try to collect data about the presence of ancient helium trapped in the corridor between distant galaxies and the Earth. The helium is believed to the remnant of the cataclysmic "Big Bang", the event thought to have been responsible for the formation of the universe.

The telescopes also collected ultraviolet data from binary star systems and planetary nebulae. One of the prime targets for the Astro-2

Please see **MACE**, Page 4

Government credit card abuse basis for policy change

Because some employees are not paying their American Express government credit card bills on time, NASA is cracking down on its policy regarding personal charges.

Effective April 1, employees who attempt to use the card for personal retail purchases may be denied the privilege. The new policy stems from recent meetings between American Express and NASA. The policy is intended to curb unauthorized card usage and reduce the amount of delinquent payments and card suspensions.

"Personal charges on the American Express government credit card have been gaining visibility and attention not only here at JSC but throughout the government. The retail block should not be an inconvenience to any employee who is using the card for official travel-related expenses. Most hotels and restaurants will not use the retail block," said JSC Comptroller Wayne Draper. "NASA currently has a delinquency rate of less than 8 percent for American Express Card payments. It is NASA management's goal to reduce this ratio even further."

JSC employees who use the credit card will not be denied retail charging privileges. However, they may be asked to justify any expenditures that do not appear to be official travel related expenses. A point of sale inquiry will be made when the card is presented for payment of merchandise or services in establishments that are not normally connected with official government travel. Charges at jewelry, toy, liquor and clothing stores will be subject to inquiry.

"Unfortunately, we have seen an increase in the amount of personal items being charged on the American Express credit card. The new retail block policy will help reduce the number of personal charges that JSC employees are making on their credit cards," said JSC Financial Management Officer John Beall.

The credit card is to be used only for official travel related expenses (lodging, meals, incidentals) while the employee is away from the official duty station. The card and the account are not to be used for personal purposes. Most of the current delinquency rate is directly attributable to personal charges rather than official travel-related charges, Draper added.

A monthly listing of all charges made by JSC employees to their American Express government credit card is reviewed by Deborah Conder, chief of the Payroll, Labor and Travel Accounting Branch. Conder stressed that misuse of the American Express card could result in termination of individual card privileges.

"JSC travelers who have their card canceled for misuse will not be eligible for any increase in travel advance amounts, should an official trip become necessary. Those employees may have to fund official business expenses out of their own pockets," Conder said.

The intent of the American Express Charge Card program is to help JSC travelers with official travel-related expenses. All travelers are encouraged to apply for the American Express government credit card. Applications are available in the Financial Management Division's Travel Claims Office, Bldg. T585, Rm. 110. For additional information, employees may call Conder at x35805.

French astronauts to lend expertise on Mir operations

By Kyle Herring

French astronauts Jean-Loup Chretien and Michel Tognini have reported to JSC to exchange information and expertise they have obtained while training for separate missions aboard the Russian Mir space station.

The two astronauts have been assigned technical duties within the Astronaut Office to provide information and experiences acquired in their training for missions aboard Mir, which could be valuable in astronaut training for the ongoing space shuttle/Mir docking missions and the future International Space Station Program. They also will participate in selected aspects of astronaut candidates training with the new class.

Chretien has flown twice aboard Russian space stations. The first in 1982 aboard the Salyut 7 station and the second aboard Mir in 1988. The latter included the first space walk conducted by a non-Russian, non-U.S. space traveler. Between those flights, Chretien served as the alternate payload specialist to Patrick Baudry for STS-51G in 1985.

Tognini flew aboard Mir in 1992 conducting 10 experiments carried to the station on an earlier Progress supply ship. He was the backup crew member to Chretien for the 1988 mission.

JSC Photo by Robert Markowitz

Ira Epstein, left, of the Stat-A-Matrix company discusses training opportunities with David Puckett, director of operations for the Orbital Sciences Corp.

Conference breaks records

By Jovan-Justine Love

NASA, in cooperation with the American Society for Quality Control, held its third annual conference on Quality in the Space Industry at the South Shore Harbour Resort and Conference Center last week.

Attendees totaled 246, which is the highest number of participants to date. International participation included space agency representatives from Russia, Canada, Japan, France and Sweden.

The conference was conducted in a teaching seminar fashion with a series of panelists including several JSC Senior Managers. Discussions with follow-up questions were centered around lessons learned and success stories about first-time experiences in quality initiatives, quality systems, quality management, quality inspections, surveillance and oversight issues, contractor compliance with the International Standards Organization (ISO 9000) for quality requirements and the impact of Integrated Product Teams on Safety, Reliability and Quality Assurance professionals.

The closing keynote speaker for the conference, astronaut Story Musgrave, articulated the need for continuing quality improvements when he said, "Doing it right means attacking the details."

JSC

Ticket Window

The following discount tickets are available for purchase in the Bldg. 11 Exchange Store from 10 a.m.-2 p.m. Monday-Thursday and 9 a.m.-3 p.m. Friday. For more information, call x35350 or x30990.

Houston Rockets: Houston Rockets vs. Milwaukee at 7:30 p.m. April 1 at the Summit. Tickets cost $11 and $16.50 on sale through March 22.

Ice hockey: Houston Aeros vs. Milwaukee at 7 p.m. March 25 at the Summit. Lower level tickets cost $11. On sale through March 15.

Bluebonnet trip: Bluebonnet trail bus trip April 1 and 8. Four different trips to choose from. Cost is $15 and $24 limit four tickets per employee.

Friendswood ballet: Friendswood Ballet presents Sleeping Beauty at 7 p.m. March 24 at the Grand 1894 Opera House in Galveston. Tickets cost $8.40 for general seating and $21 for special seating.

Moody Gardens: Discount tickets for two of three different attractions: $9.50

Space Center Houston: Discount tickets: adult, $8.75; child (3-11), $7.10.

Metro tickets: Passes, books and single tickets available.

Movie discounts: General Cinema, $4.75; AMC Theater, $4; Loew's Theater, $4.75.

Stamps: Book of 20, $6.40.

JSC history: *Suddenly, Tomorrow Came: A History of the Johnson Space Center*. Cost is $11.

Upcoming events: Houston International Festival from April 20-30. Tickets cost $3. Snow White and the Seven Dwarfs at noon April 8. Tickets on sale March 13. Loving Feelings Concert at 7 p.m. Sept. 30. Tickets cost $32.50.

JSC

Gilruth Center News

Sign up policy: All classes and athletic activities are first come, first served. Sign up in person at the Gilruth Center and show a NASA badge or yellow EAA dependent 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 more information, call x30304.

EAA badges: Dependents and spouses may apply for photo identification badges from 7 a.m.-9 p.m. Monday-Friday; and 8 a.m.-4 p.m. Saturdays. Dependents must be between 16 and 23 years old.

Weight safety: Required course for employees wishing to use the weight room is offered from 8-9:30 p.m. March 14 and March 30. Pre-registration is required. Cost is $5.

Defensive driving: Course is offered from 8:15 a.m.-3 p.m. Saturday. Next class is April 1. Cost is $19.

Exercise: Low-impact class meets from 5:15-6:15 p.m. Mondays and Wednesdays.

Aikido: Martial arts class meets from 5-7 p.m. Tuesdays and Wednesdays. Cost is $25 per month. New classes begin the first of each month.

Country dancing: Beginners class meets from 7-9 p.m. Mondays; advanced class meets from 8:30-10 p.m. Mondays. Partners are required. For additional information, contact the Gilruth Center at x33345.

Ballroom dancing: Ballroom dancing classes. Cost is $60 per couple. For additional information call the Gilruth Center at x33345.

Softball tournament: A preseason softball tournament will be held March 25-26. Cost is $100 per team. For more information call the Gilruth at x33345.

Fitness program: Health Related Fitness Program includes a medical examination screening and a 12-week individually prescribed exercise program. For more information, call Larry Wier at x30301.

JSC

Dates & Data

Today

Alumni conference: The JSC alumni of the Professional Development Program and the Career Development Program will host a videoconference from 10 a.m.-1 p.m. March 10 in Bldg. 17, Rm. 2026. Acting NASA Deputy Administrator Gen. John Dailey will discuss his "View from the Top." For additional information call Wayne Ordway at x36626.

Cafeteria menu: Special: baked meatloaf. Total Health: baked potato. Entrees: chicken fajitias, ham steak, pork and beef eggrolls, steamed fish, Reuben sandwich. Soup: seafood gumbo. Vegetables: stewed tomatoes, seasoned spinach, cut corn, macaroni and cheese.

Saturday

Star gazing: The JSC Astronomical Society will host viewing of the spring skies through telescopes from dusk-10 p.m. March 11 at Challenger 7 Memorial Park. For more information call Bill Williams at 339-1367.

Monday

Cafeteria menu: Special: Italian cutlet. Total Health: roast beef au jus. Entrees: chicken a la king, enchiladas with chili, vegetable lasagna, steamed pollock, French dip sandwich. Soup: split pea and ham. Vegetables: Brussels sprouts, oriental vegetables, buttered carrots, lima beans.

Tuesday

Cafeteria menu: Special: stuffed cabbage rolls. Total Health: roasted turkey. Entrees: turkey and dressing, country style steak and hash browns, beef ravioli, baked chicken, fried cod fish. Soup: tomato Florentine. Vegetables: Italian blend, okra and tomatoes, corn cobbette, navy beans.

Wednesday

Contract seminar: The Space Center-Houston Chapter of the National Contract Management Association will host a Spring National Education Seminar from 8:30 a.m.-5 p.m. March 15 at the University of Houston Clear Lake Bayou Bldg. auditorium. The seminar will address the fundamentals of contract costs. Registration for members is $135, nonmembers $185. For registration information civil servants should contact Richard Regenburgh at 244-5973, contractors should call Kathleen Martins at 333-7191.

Astronomy seminar: The JSC Astronomy Seminar will meet at noon March 15 in Bldg. 31, Rm. 129. An open discussion meeting is planned. For more information, call Al Jackson at 333-7679.

Toastmasters meet: The Spaceland Toastmasters will meet at 7 a.m. March 15 at House of Prayer Lutheran Church on Bay Area Blvd. For additional information, contact Darrell Boyd, x36803.

Bike ride: The JSC Bicycle Club will meet for a 1.1- and a 1.6-mile loop at 5:30 p.m. March 15 behind the Grumman Bldg. at Ellington Field. For additional information call Juliette Wolfer at x38459.

Cafeteria menu: Special: pepper steak. Total Health: stir fry pork with rice. Entrees: liver and onions, stir-fry pork with rice, steamed fish, western special, Reuben sandwich. Vegetables: steamed broccoli, yellow squash, macaroni and cheese, vegetable sticks.

Thursday

Cafeteria menu: Special: chicken fried steak. Total Health: baked potato. Entrees: beef tacos, steamed pollock, baked chicken, catfish special. Soup: navy bean. Vegetables: spinach, cut corn, breaded okra, pinto beans.

Friday

Cafeteria menu: Special: tuna noodle casserole. Total Health: baked potato. Entrees: steamed salmon steak, baked chicken, fried cod fish, ham steak. Soup: seafood gumbo. Vegetables: French cut green beans, cauliflower with cheese, green peas, black-eyed peas.

March 30

AIAA workshop: The American Institute of Aeronautics and Astronautics will host a real-time workshop on MATLAB software from 9 a.m.-4 p.m. March 30 at the LPI Lecture Hall. For more information call Naz Bedrossian at 333-2127.

March 31

Alumni league: The NASA Alumni League will hold its annual dinner/dance beginning at 6 p.m. March 31 at the Gilruth Center. Tickets cost $7.50 for members, $15 for nonmembers. For more information call Al Richmond at 280-7777 or Jerry Craig at 420-2936.

April 12

PSI meets: The Clear Lake/NASA Area Chapter of Professional Secretaries International meets at 5:30 p.m. April 12 at the Holiday Inn on NASA Road 1. For more information, contact Elaine Kemp x30556.

May 10

PSI meet: The Clear Lake/NASA Area Chapter of Professional Secretaries International meets at 5:30 p.m. May 10 at the Holiday Inn on NASA Road 1. For more information, contact Elaine Kemp x30556.

May 29

Memorial Day: Most JSC offices will be closed in observance of the Memorial Day holiday.

June 14

PSI meet: The Clear Lake/NASA Area Chapter of Professional Secretaries International meets at 5:30 p.m. Feb. 8 at the Holiday Inn on NASA Road 1. Patsy Mitchell will present "Leadership Without Authority." For additional information, contact Elaine Kemp x30556.

July 4

Independence Day: Most JSC offices will be closed in observance of the Fourth of July holiday.

JSC

Swap Shop

Swap Shop ads are accepted from current and retired NASA civil service employees and on-site contractor employees. Each ad must be submitted on a separate full-sized, revised JSC Form 1452. Deadline is 5 p.m. every Friday, two weeks before the desired date of publication. Ads may be run only once. Send ads to Roundup Swap Shop, Code AP2, or deliver them to the deposit box outside Rm. 181 in Bldg. 2. No phone or fax ads accepted.

Property

Sale: San Leon, herb farm, 2.5 acres, 16 x 80, 3-2, mobile home, garage, pond, fenced, 333-6277 or 339-3562.

Sale: Santa Fe, 2.5 acres, Ave E. & 32nd south off Hwy 646, front 220' x 495D, $20k, 337-1311.

Sale/Lease/Trade: Near 290&1960, 3-2-2A, new roof/paint/carpet, $65k. x31265 & 286-3161.

Sale: LC, Bayridge, 3-2-2, brick, central air, ceiling fans, lg cul-de-sac yard, $53k/obo. 286-1934.

Rent: Arkansas cottage overlooking Blue Mountain Lake & Magazine Mountain, lg stone FPL, antiques, in the woods, sleeps 6-8. Corcoran, x33005 or 334-7531.

Rent: Galveston condo, furn, sleeps 6, Seawall Blvd & 61st St, wkend/wkly/dly rates. Magdi Yassa, 333-4760 or 486-0788.

Lease: Clear Lake Shores, 2-2-1 home, beautifully furn, $1k/mo. Corcoran, x33005 or 334-7531.

Sale/Lease: Waterfront condo, 3-2, $59k cash or $62k owner finance. 326-2221.

Lease: Friendswood, 4-2-2 house, non-smoker, no pets, references required, $1k/mo. + dep. 992-7120.

Lease: Clear Lake condo, lg 2 BR, new paint, ceiling fans, W/D conn, $475/mo + dep. 326-6537.

Rent: New Orleans condo in French Qtr, Jazz festival wk, 4/28 - 5/5, furn Greek Renaissance, private rooftop deck, $500. 333-8126 or 488-1327.

Rent: El Dorado Trace, 2-2, fully furn, FPL, alarm, sauna, hot tub, $675 + electric. 333-8126 or 488-1327.

Sale: Camino South, 3-2-2A, FPL, pool, appliances, $75k. Mike, 480-0336.

Sale: Dickinson, 3-2-2, FPL, hot tub, deck in wooded area w/fenced backyard, assumable loan. 534-3845.

Cars & Trucks

'86 Chevette, auto, A/C, clean, 1 owner, 78k mi, $1.3k. Juan, x38833 or 333-0406.

'85 Olds Calais, 5-spd, A/C, good cond, 4 cylinder, $1,850/obo. 991-0821.

'93 Ford Probe GT, auto, A/C, AM/FM/cass, leather, ex cond, $14,750. x30745 or 992-4043.

'89 Chrysler LeBaron, convertible, GT Turbo, $5.9k. x38609 or 338-2292.

'83 Olds Tornado, V-8, power, $2k/obo. Steve, 947-3270.

'88 Nissan Sentra, 2 dr, red, AM/FM/cass, 5 spd, A/C, 90k mi, $2.1k/obo. Walt, x47392.

'82 Chevette, good work car, $600/obo. 485-4008.

'87 Mazda RX7 Turbo, 5 spd, 16" power brakes/windows, A/C, AM/FM/cass, power sunroof, low miles, cruise, rear spoiler, $6.5/obo. 280-0285.

'83 Nissan Sentra, 3 dr hatchback, 5 spd, A/C, 123k mi, engine rebuilt '94, $1.4k./obo. 464-8694.

'88 Honda Accord LXI, white, hatchback 2-dr, A/C, AM/FM/cass, sec system, ex cond, $4.3k. x36486 or 488-2276.

'87 Mazda 626LX, 4 dr, auto, loaded options, 77k mi, JSC Credit Union value, $4.7k. Linda, 488-8588.

84 Cadillac Coupe De Ville, wht/red leather, good cond, all power, cruise, AM/FM/cass, $3.3k/obo. x38070 or 538-1179.

'92 Mitsubishi Eclipse GS, 31.7 mi, 5 spd, power, alarm system, black w/silver, CD changer, DOHC, 16VLV, ex cond, $11k/obo. Lonnie, x48620 or 482-0547.

'92 Mitsubisi 3000Gt, 5 spd, A/C, charcoal gray, 20k mi, sunroof, $15.2k. Mark, x47112.

'68 Mustang, 2 dr, hardtop, good mech cond, AT, PS, needs body & interior work, $2,850/obo. Scott, 282-5455 or 554-2206.

'87 Chevy Nova, auto, new tire/timing belt/batt, ex cond, $2,650. Ian, x34853.

'86 Nissan Sentra, 5 spd, A/C, 2 dr, light blue, 95k mi, $1.8k. Ian, x34853.

'92 Nissan 240SX LE, 5 spd, loaded, dk red, gray leather, 12k mi, $13.9k. Ken, x48810 or 486-4763.

'93 MX-6, green, V6, 5 spd, beige inter, auto moonroof, ABS, alarm sys, rear spoiler, 27k mi, ex cond, $16.1k/obo. 486-2114.

'89 Ford Bronco II XLT, 5 spd, 2 W/D, V6, cruise, FM cass, all power, very clean, 72k mi, $6k. Dave, 482-3428.

'86 Oldsmobile Cutlass, 4 dr, V6, leather, good cond, $2k/obo. 326-1461.

'86 Nissan Sentra, blue, 5 spd, A/C, AM/FM, 77k mi, $1,750/obo. G. Moore, 286-1863.

Cycles

Honda Moped, classic, low mileage, $500. Jim, x38624 or 475-9671.

'82 Yamaha YZ 80 & '85 Yamaha YZ 80, less than 20 hrs on ea, $500 & $600 respectively. 332-9105.

Boats & Planes

Sovereign, 24', ex cond, extra jib, depth sounder, head, stove, sleeps 4, electric start Johnson OB, recent bottom, $6.5k. Mike, 282-2787 or 286-1691.

'85 Four Winns, 21', 260 hp Mercruiser I/O, ex cond, low hrs, Tandem trailer, VHF, depth finder, extras, $7,995. 280-0568.

'90 Yamaha Wave runner LX, 42 hp, Sportsman trailer, access, $2.5k. Laura, x31969 or 996-5107.

'94 Yamaha Wave raider, 80 hp, trailer, access, $6.2/obo. 286-6103.

Audiovisual & Computers

Passport Trax for Windows. David, x36427.

Apple IIe, 128 kb RAM, 2 FD, mono green monitor, ImageWriter printer, manuals/software, $295. 280-9621.

HP Deskjet 500 printer, $250. Cheryln, x47461 or 437-1265.

Citizen printer, "CSX-140" w/GSX color option, $250. Magdi Yassa, 333-4760 or 486-0788.

Musical Instruments

MIDI Music sequencer, $50. David, x36427.

Acoustic guitar w/case & fork tuner, $100/obo. Pete, x31694 or 481-8561.

Guitar 12 string acoustic/electric Takamine FP400 S w/custom case, new $1.6k sell $795; guitar amplifier Peavey Classic, 2 - 12" spkrs, reverb, tremolo, chorus, footswitch, 4 channels, $395. 280-9621.

Pets & Livestock

AKC Chihuahua pups, 3 mos, shots, wormed, $125 males/ea, $150/females/ea. 337-9218.

African Congo grey parrot, tamed, talks, whistle, healthy, $600/obo. Pete, x31694 or 481-8561.

Rottweiler puppies, AKC registered. Linda, 484-0987.

Dalmation, liver & white, AKC registered, 14 mos, 4'x8'x6' kennel & Dogloo, $425/all. 992-8936.

Free, black Lab, male, 5 yrs. x38843.

Household

Love seat, brown velour, contemporary style. x40250 or 941-3262.

Signature, 18 cu ft, chest deep freeze, $275/obo. Kathy, x38193 or 409-267-3750.

Antique tiger eye oak round table, buffet & 5 chairs, $750. Jim, x38624 or 475-9671.

Apartment size electric stove, good cond, $50/obo. Scott, 282-5455 or 554-2206.

Breakfast table w/4 chairs & 2 leaves, $200. 286-0022.

Four drawer chest of drawers, $75. Sam, 332-3168.

Two off-white, fabric, cushion, den chairs, good cond, $30. Tony, x35966.

Couch & loveseat, navy, $150/obo; 2 lt blue floral lamp shades, $10; laundry center wire shelf unit, $15. Sandy, 698-1341 or 334-7542.

Coffee & end table, limestone /marble base, beveled glass tops, $200/both. 334-7639.

Free Zenith 25" color console TV, oak, erratic on/off, you pick up. 488-5058.

Wanted

Want 30' - 32' extension ladder. Johnny Conkin, x32353 or 992-8177.

Want wedding dress, petticoat, size 6-8; base plates & columns for wedding cake. Joy, 946-4034.

Want non-smoking, to join existing 3-person carpool from Meyerland/Braeswood area, starting April, 8 a.m. - 4:30 p.m. nego, 4dr car w/reasonable back seating space required. Al, x36603 or Mel, x30116 or Bob, x37340.

Want personnel to join VPSI vanpool, West Loop Park & Ride lot at 6:50 a.m. to NASA/Contractors. Richard, x37557 or Ed, x36124.

Want personnel to join VPSI Vanpool departing Meyerland Park & Ride lot at 7:05 a.m. for JSC, vanpool consists of on-site personnel working the 8 a.m. - 4:30 p.m. shift, looking for 2 - 3 more. Travis Moebes, x45765 or Don Pipkins, x35346.

Want baby crib, stroller. Norma, x49831.

Want used scaffold wrench, reasonable, good cond. Roger, 331-3304.

Want used slide projector, good cond. Robert, 335-2085 or 334-2137.

Want someone to clean house on regular basis, references required. x36080.

Want professional roommate, split expenses in 2-2, El Dorado condo. Mark, 480-6084 or 643-9300.

Want baby jogger. 332-9105.

Want drummer for 4-piece, "Alternative" band. Steve, x45658 or 333-4222.

Miscellaneous

Motorcycle attire, jacket, chaps & vest, man's large, ladies medium, $150/set. Karen, x38784 or 291-9100.

Browning Citori, 12 ga, extra tubes, ex cond, new $1k sell $850. Roger, 331-3304.

Briefcase, burgundy, 6 mos, $50/obo; roller blades, sz 8, ladies, worn once, $100/obo. Lisa, x40213 or 554-4140.

Bumper hitch, "Draw Tight" class II for Lincoln Town car, Ford or Mercury, rear wheel drive, $85/obo. Walt, x47392.

Southwest Airlines "Friends Fly Free" partner to travel to Dallas on weekends. Matt, x47014 or 486-7417.

Chevy, 15" wire spoke hubcaps, w/locks, $50. Mike, 484-0987.

Quality infant boys clothing, Gymboree, newborn & infant, Osh Gosh, Carter, others, sz 6 -18 mos. 488-3314.

Pyrometer 0-800°F rigid arm thermocouple type, $175. Tom, x36309.

Tires, 4-P225UR15, $50; bra for '82-'86 Mustang, $30. 554-2879.

HEPA air filter for home A/C, 5 ton max, $75; Gerry booster auto seat, good cond, mdl #675, $25; ridged foam attic ceiling door insul kit, $15. Doug, x48851 or 486-7412.

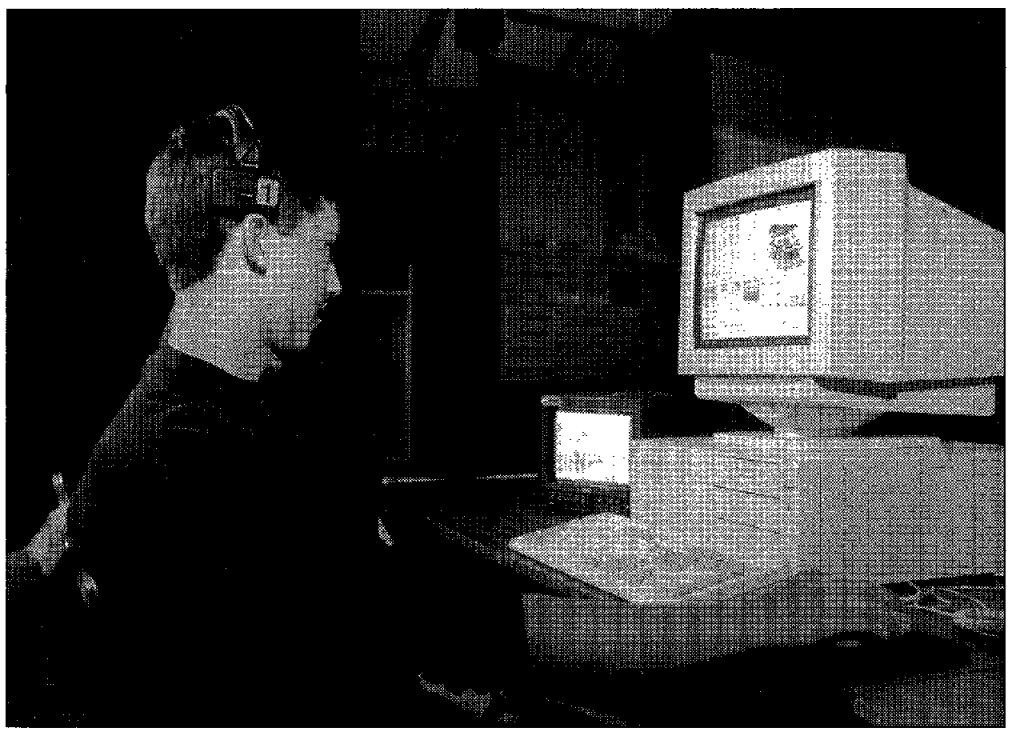
Delux Soloflex gym w/ leg & butterfly attachments, ex cond, $350; stairstepper, $100. Leslie, x38750 or 334-5113.

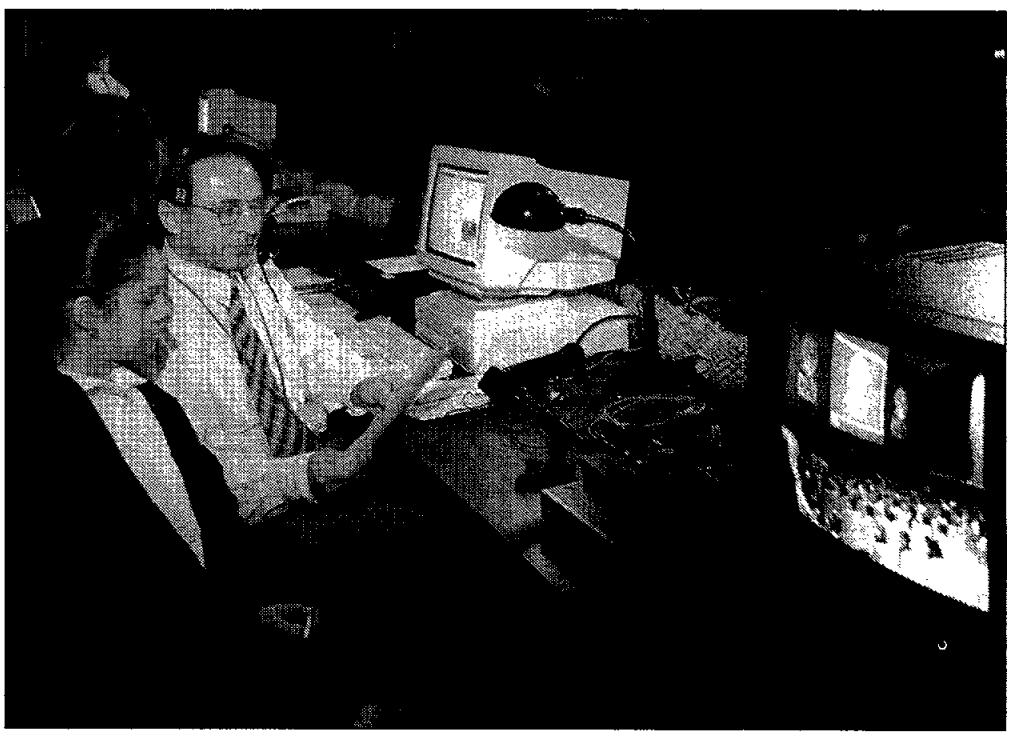
Smith Corona electric typewriter, very good cond, $50; Big Sur waterbed w/bookshelf hdbd, ex cond, $125. x38484 or 334-4124.

Pinch-pleated, fully lined, rosy plum drapes, ex cond, 4-37" x 84", panels, 5-35" swags, 2 cascades, 3 ties, plus sheers, $300; Nordic Track Achiever, new $850 sell $600. Janine, x45084 or 482-7550.

Eagle Aerospace stock. Betsy, x47728.

Free firewood, oak, you must haul. x31905.





Students explore Earth and universe

Eruption on Io and Mars rover highlight 1995 Jason Project

By Barbara Tomaro

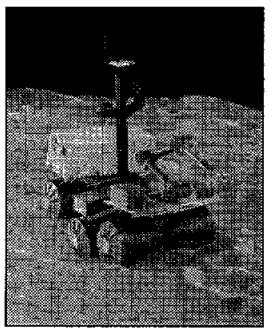
Students and spectators gathered at JSC to experience first-hand the latest technology developed to explore Earth and the universe as part of the Jason Project.

This year's mission, "Voyage VI: Island Earth," was downlinked to Teague Auditorium over the past two weeks, allowing students and teachers a once-in-a-lifetime opportunity to drive a robot in a volcano and ask scientists questions.

In addition to remotely operating the state-of-the-art Mars rover, students were treated to a rare view of the latest eruption of a volcano on Jupiter's moon Io. The eruption, viewed from NASA's infrared telescope facility on Mauna Kea, was the largest eruption seen to date according to Dr. John Spencer from Lowell Observatory.

The JASON Project was created by scientist and explorer Robert Ballard, senior scientist at the Woods Hole Oceanographic Institution, who conducted well-publicized explorations of the wrecks of the Titanic and the German battleship, Bismarck. Those two expeditions and Ballard's desire to promote enthusiasm for exploration, sparked the interest which created the Jason foundation for Education in 1989. Jason was founded to motivate and provide professional development for teachers, and excite and engage students in science and technology.

This year's Jason VI Project was an exploration of the island of Hawaii which allowed students at interactive sites around the world a chance to view and participate in the remote robotic exploration of the most isolated land mass on Earth.

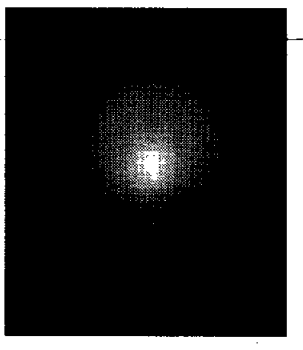


"Earth is an oasis of life in space," said Angelo Casaburri, JSC education specialist. "It began like the other stony planets. But then, Earth's unique developmental processes formed an ocean, atmosphere, and land. Volcanoes were central to this process. By looking inward at volcanoes, we can learn about space and our solar system."

JASON PROJECT™

'An eruption of this magnitude happens very infrequently. To catch it live, with a huge audience of students studying volcanoes, is incredible,'

—Bob Ballard, Jason Project founder



One of the most exciting aspects of the latest project is the debut of the future Mars roving vehicle. The Marsokhod rover was created by an international team consisting of the Ames Research Center, McDonnell Douglas, and The Planetary Society in cooperation with Russia's Lavochkin Association, VNIITransMash, and IKI. On board the planetary rover is a robotic arm used to pick up surface samples, provide microscopic imaging and, in the future, deploy scientific instruments.

These instruments will support experiments that determine the chemical composition of soil and rocks, and the mechanical properties of surface materials. The vehicle also uses an array of cameras for scientific imaging, including stereo images for 3-D viewing and panoramic cameras for wide-angle viewing.

During the Jason Project, students at several interactive sites were allowed to control the vehicle remotely and experience the thrill of planetary exploration for themselves. In addition to the Marsokhod, students were able to operate robot mechanisms to take samples from active flowing lava, participate in biomedical research on endangered nectar-feeding forest birds, and observe via computer the actual infrared imagery from the NASA facility on Mauna Kea, part of the world's greatest astronomical observatory complex.

Hawaii has the most active volcano on Earth, and the best observatories in the world, Ballard said, and "for anyone interested in interdisciplinary science, the combination is irresistible." JASON VI gave participants an opportunity to study the erupting Kilauea volcano, and to learn how Earth was formed billions of years ago, how vast primordial volcanic eruptions created the atmosphere, oceans, and perhaps even how microenvironments made life possible. At the same time, they hope to make a correlation between Earth's volcanoes and those on other planets.

Prior to participating in the Jason Project, teachers were required to attend a one-day "in-service" training course held in December at JSC.

During that session, they received a Jason curriculum guide with suggested lesson plans that were designed to compliment expedition activities and to increase student interest and awareness in scientific disciplines.

The Jason Foundation for Education is supported by a unique alliance of public, private and non-profit organizations including the EDS Corporation, Bechtel Group Inc., the National Geographic Society, the United States Department of Education and NASA. ❑

Top Left: Tim Rask, a home school student, drives the Marsokhod rover in the volcanoes of Hawaii. Rask is the son of NASA employee Doug Rask of the Trajectory Operations branch in the Flight Design and Dynamics Division. Top Right: Angelo Casaburri, a JSC education specialist, explains to Brenda Flores a Crockett Elementary third grader, the process of recording a question and picture. Scientists in Hawaii answered hundreds of questions from students at several interactive sites. Bottom Left: Lori Wheaton, a JSC education specialist, guides students through the process of recording a questions for scientists. A question along with a picture of the student are sent electronically to scientists in Hawaii. Bottom Left: Casaburri explains to students how to drive the Marsokhod rover using the on-line activity software. From left are Cindy Gagne, a fifth grader from Sante Fe Intermediate; Chris Benthall, a home school student; and Justin Weyer, another Sante Fe fifth grader.

JSC Photos by Jack Jacob and Norma Rhodes

Williams receives presidential award

Willie Williams, manager of the Space Station Systems Engineering and Integration Office, recently received the Presidential Award from the Houston Citizen's Chamber of Commerce. Williams was recognized for his ardent service as president of that organization.

Williams was elected president of the chamber in 1993 and has served as an active board member since 1973. He has chaired the Program Goals Committee while also a member of various task force committees.

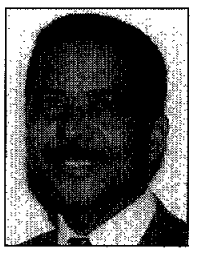
Simanton goes to DC

Don Simanton, a long-time JSC employee and assistant director for the Information Systems Directorate's Information Resource Management, is going to NASA Headquarters to be the deputy chief information officer.

"Although Mr. Simanton's leaving for a new position at Headquarters is a loss to ISD, it is a gain for the agency as a whole," said Jane Starnes, director of ISD. Simanton began his new job March 1.

Simanton will work closely with the chief information officers at all NASA centers, including JSC's CIO Jack Garman, coordinating the effective use of information resources technology throughout the agency.

JSC
People



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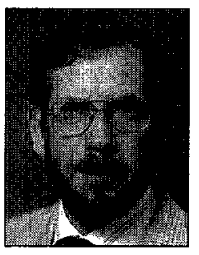

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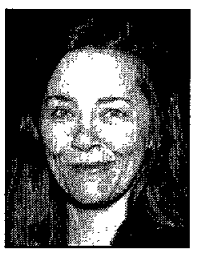
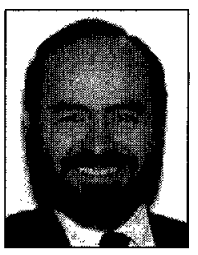


Hicks



Fontenot

Covey

Fanelli, Hicks earn top secretary honors

Two JSC employees recently received the top award for secretarial support. Jeanette Fanelli of the Engineering Directorate's Navigation Control and Aeronautics Division recently received the Marilyn J. Bockting award for secretarial excellence. Fanelli was recognized for her ability to train new employees to be efficient, responsive and responsible. She was also cited for her positive upbeat attitude when asked to take on additional duties.

Rhonda Hicks of the Mission Operations Directorate's Management and Systems Engineering Office recently received the award for her outstanding support of two offices and for her "can do" attitude. Her unwavering job dedication, quality work and excellent organization skills attribute to smooth running of both offices.

Facility manager of the month

Carlos Fontanot has been awarded Facility manager of the month for March. Fontanot is the Facility Manager for the Teague Auditorium and he disapproved the shutting down of fire alarm bells for a maintenance/construction activity because of children in the building for the Jason Project.

Presenters said Fontanot's actions were an example of how a Facility Manager used his knowledge of the activities in the building to prevent unnecessary risk. Had there been an emergency such as a fire, the large number of children would have been extremely difficult to evacuate without the fire evacuation bells active.

Former astronaut Covey elected president of ASE

Former astronaut Richard Covey has been elected president of the Association of Space Explorers. Covey, a veteran of four shuttle flights, will serve a one-year term to this exclusive association made up of men and women who have flown in space. Covey is currently deputy program manager for space flight simulation and training at Unisys Space Systems of Houston.

JSC Photo by Robert Markowitz

NEW RECRUITS —The 1995 astronaut candidate class arrived Monday at JSC for an extensive year of training. The candidates began their busy day interviewing with several reporters. Bottom row left to right: Pilot Robert Curbeam; Mission Specialist David Williams of the Canadian Space Agency; Pilots James Reilly, Scott Altman, Jeffrey Ashby, and Rick Husband and Mission Specialist Stephen Robinson. Middle row left to right: Mission Specialists Takao Doi of the National Space Development Agency of Japan, Michael Anderson and Kathryn Hire; Pilot Pamela Melroy; Mission Specialists Edward Lu and Kalpana Chawla and Pilot Susan Still. Top row left to right: Pilots Joe Edwards, Steven Lindsey, Frederick Sturckow and Dominic Gorie; Mission Specialist Janet Kavandi; Pilot Michael Bloomfield and Mission Specialist Carlos Noriega.

Clementine to highlight 26th lunar conference

By Eileen Hawley

A wealth of scientific data gathered by the Clementine lunar probe will be one of the highlights of the 26th annual Lunar and Planetary Science Conference to be held next week at the Gilruth Center.

Experts in the fields of meteorites, astronomy, lunar geology and geochemistry will meet to share information on a variety of subjects.

Conference presentations beginning Monday include: 8:30 a.m., Basaltic Meteorites, Real and Virtual, Mars Exploration, Pathfinder and Beyond, Origins of Planetary Systems and Mercury; 9:15 a.m., Remote Sensing; and 10:15 a.m., Lunar Exploration Strategies and Resources.

A special session will be held at 1:30 p.m. with presentations to 1994 Stephen Dwornik Student Paper Award Winners followed by the Harold Masursky Lecture. Dr. Michael. Drake will discuss "The Moon: What We (Think We) Know About It, How We Know It, and What We Don't Know."

The 2:30 p.m. presentations include: Presolar Grains, Mars Surface Mineralogy and Remote Sensing, a session on Clementine Explores the Moon and Outer Planets/Satellites.

Tuesday presentations include: 8:30 a.m., Chondrule Formation, Mars Geophysics, and Lunar Highlands Rocks and Geology; and 1:30 p.m., Calcium-aluminum-rich Inclusions and their Formation, Mars Geology, Lunar Mantle Processes and Mare Basalts and Tektites and Impact Studies.

Wednesday will feature: 8:30 a.m., Chondrites, Meteorites and Mars I, Surface, Volatiles and Atmosphere, Meteorites from the Moon and Craters on the Earth with Diamonds; 9:45 a.m., Lunar Surface Processes; and 1:30 p.m., Meteorites and Mars II, The Chicxulub Syndrome and a special session on the Discovery programs.

Thursday will feature: 8:30 a.m., Differentiated Meteorite Melange, Venus Resurfacing and Lithospheric Properties and The NEAR Mission and the Nature of S-class Asteroids; and 1:30 p.m., Interplanetary Dust, Venus Geology and Surface Properties, Planetary Interior Processes and Asteroids, Too.

Next Friday's activities include: 8:30 a.m., Carbonaceous Chondrites, Volcanism and Lava Flows and Shoemaker-Levy 9 Impacts.

All fitness activities at the Gilruth Center, except the weight room, will be closed to employees during the week-long conference.

Missions to the Moon, Sun, Venus and a comet picked for Discovery

A mission to study the Moon has been selected for funding as part of NASA's Discovery Program, an ongoing agency effort to foster the development of frequent, low-cost solar system exploration missions. Missions to study the Sun, Venus and a comet also have been selected for further detailed study under the Discovery effort.

The mission to the Moon, known as Lunar Prospector, was judged mature enough to proceed directly to full development and construction, following final technical definition. Scheduled for launch in June 1997, the $59 million project will map the chemical composition of the lunar surface and the Moon's global magnetic and gravity fields at a level of detail greater than that achieved by previous missions. The mission also should locate any significant quantities of water ice in shadowed craters near the lunar poles, a key issue for any future human exploration.

The other three Discovery missions will undergo detailed study for the next six to nine months, leading to a fall 1995 decision to pick one for development and flight. They are, Stardust, which would fly through the extended coma of the active comet P/Wild 2, taking images and returning a sample of its cometary dust to Earth laboratories; the Venus Multiprobe Mission, which would drop 16 small probes into the thick Venusian atmosphere to enable study of its unusual atmospheric circulation, and Suess-Urey, which would collect samples of solar particle matter streaming outward from the Sun and return it to Earth for laboratory study.

"I am absolutely thrilled with the potential of these missions, and with the universally high quality of the 28 proposals submitted to us," said NASA Administrator Daniel S. Goldin. "The university and aerospace industry communities should be proud of their efforts, which represent a model of how to pursue scientifically first-rate space exploration using small, advanced spacecraft."

The Lunar Prospector will be built and launched on a Lockheed Launch Vehicle by Lockheed Missiles and Space Co., under the direction of Principal Investigator Dr. Alan Binder of Lockheed. Ames Research Center will be responsible for one of the spacecraft's instruments and technical support.

"Discovery missions are far less expensive than any mission we have ever done in planetary exploration, yet they promise to deliver excellent science," said Dr. Wesley Huntress, associate administrator for space science. "We've turned the old way of doing business upside down." Formally started in NASA's fiscal year 1994 budget, the Discovery program features small planetary exploration spacecraft with focused science goals that can be built in 36 months or less, for less than $150 million.

Stardust would be launched on a Med-Lite in February 1999 for a total cost to NASA of $208 million. The Venus Multiprobe Mission would be launched on a Delta II launch vehicle in June 1999 for a total cost to NASA of $202 million. Suess-Urey would be launched on a NASA Med-Lite launch vehicle in August 1999 for a total mission cost to NASA of $214 million. Twenty-eight formal proposals for the next Discovery missions were received by NASA in October 1994 in response to an August 1994 announcement of opportunity.

NASA officials hope to release announcements of opportunity for new Discovery investigations on the average of every 18 months.

MACE test space station hardware

(Continued from Page 1)

payload, however, was the Jovian moon, Io, currently experiencing a huge volcanic eruption. The event was first noticed by astronomers at NASA's Infrared Telescope Facility in Hawaii and the information was relayed to researchers at Marshall, who worked quickly to develop the plan that resulted in the Io data takes.

While *Endeavour*'s astronomers worked on the flight deck, Oswald set up an experiment called MACE, the Middeck Active Control Experiment. The boxy device is designed to test methods for reducing the vibration imparted on free-floating structures through the course of space flight and to measure the effect of vibration transfer from one free-floating structure to another. The experiment should provide engineers with additional data needed to design more stable spacecraft and hardware for the International Space Station.

Endeavour is scheduled to complete its eighth mission with a landing at the Kennedy Space Center at mid-afternoon on March 17.

While *Endeavour* circled the globe, engineers at KSC turned their attention to the shuttle *Atlantis*, preparing the ship for launch in June on STS-71, the first mission to dock with the Russian Space Station Mir.

Technicians have completed the weight and balance tests on the Orbiter Docking System, which will be mounted in *Atlantis*' cargo bay to enable the shuttle to linkup to Mir. *Atlantis*' twin solid rocket boosters have also been stacked and a freon water interchanger and associated coolant loops have been replaced with no impact to the processing schedule.

The tunnel connecting the Spacelab science module with the crew cabin is being installed along with other tests of the shuttle's hydraulic and flight control systems.

Discovery's three main engines have been removed as workers ready the shuttle for its next mission in late June, STS-70, to deploy the final Tracking and Data Relay satellite.

Other routine operations are continuing on schedule for the fourth shuttle mission of the year.

Internet surfers from around the world got a chance to feel like participants in the STS-67 mission as they "hung 10" on the Astro-2 Home Page.

Those who made the connection were able to check on the Mission Elapsed Time, biographies of the crew, objectives of the observations and more.

By Tuesday, 600,000 people had used their computers to "shoot the curl" of the astronomical observations being conducted. Interest was so high that the Astro-2 Home Page had to be duplicated on two additional host computers to handle the load.

To get to the Astro-2 page, use the following Internet address: http://astro-2.msfc.nasa.gov/.

Clinic receives accreditation

The Kelsey-Seybold clinic has been awarded a two-year accreditation by the Commission on Laboratory Accreditation of the College of American Pathologists.

This national recognition places the clinic in an elite group of only 4,600 clinics nationwide. Inspectors found the clinic exceeded inspection programs recognized by the federal government.

Correction

A picture in the March 3 issue of Space News Roundup erroneously identified Judson Robinson as pictured in ceremonies for Black History Month. The individual is Willie Williams.