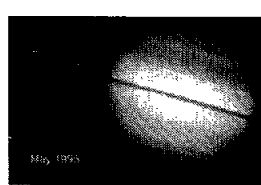


The JSC Hurricane Rideout Team and the Emergency Preparedness Office offer hurricane tips. Story on Page 3.



The Hubble Space Telescope captures rare photos of Saturn with no rings. Photo on Page 4.

# Space News Roundup

Vol. 34

June 9, 1995

No. 23

## Employees to bring sons to work next week

JSC civil service and contractor employees sons will have the opportunity to experience different aspects of the space program first hand during "Take Our Sons to Work" day Wednesday.

The day will begin at 8 a.m. in the Teague Auditorium with each boy receiving an information package. A special welcome from Estella Hernandez Gillette, director of the Equal Opportunity Program Office will take place at 8:30 a.m. followed by presentations from several organizations. Activities include presentations by astronauts and special demonstrations of a space suit, wind tunnel and the space station.

Each boy will spend the remainder of the day observing and sharing in his sponsor's normal business activities.

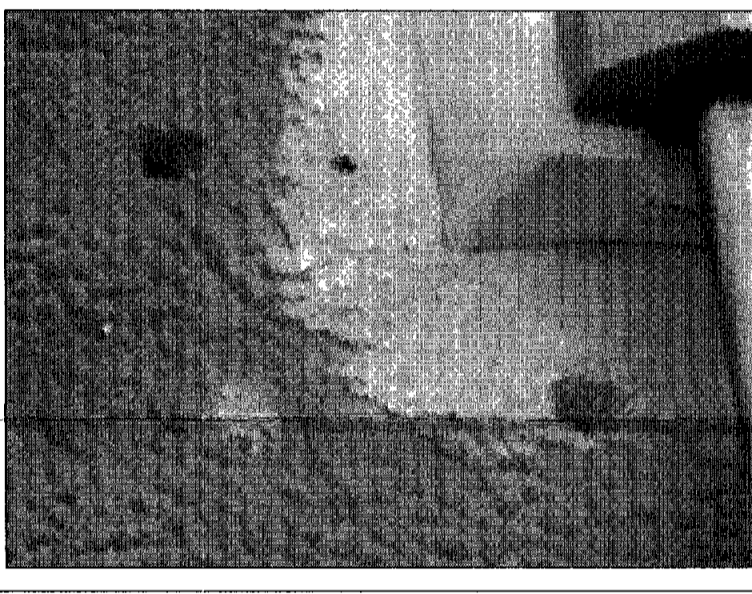
Due to the popularity of the program, allocations have been assigned to each directorate for the limited seating that is available in Teague. Allocations are based on the number of civil servants per directorate.

Employees may contact their Administrative Officer to sign-up for seats in the auditorium. In addition, seating is allocated for contractors and their sons. Letters were sent to each contractor office with allotment numbers.

Questions regarding "Bring Our Sons To Work" may be directed to Lupita Armendariz in the Equal Opportunity Programs Office at x30600.



**Discovery's launch has been delayed in order to make repairs to foam insulation on the vehicle's external fuel tank. Technicians discovered that woodpeckers, above, had inflicted more than 100 small holes, below, in the insulation material.**



## Managers to set launch date for Atlantis next week

With the shuttle launch schedule having been revamped, NASA engineers are now setting their sights on final preparations for the launch of *Atlantis* in about two weeks on STS-71 mission, the first flight in which a space shuttle will attempt to dock with the Russian Space Station Mir.

Last week, NASA officials decided to delay the launch of *Discovery* on the STS-70 mission to enable technicians to roll-back the shuttle to the Vehicle Assembly Building at Kennedy Space Center for the repair of more than 100 holes to the ship's external fuel tank insulation. The Tracking and Data Relay Satellite deployment flight now is scheduled after STS-71, with launch tentatively planned for July 13.

The insulation holes were the work of a pair of woodpeckers at Launch Pad 39B. While some of the holes were minor and others were repaired at the pad, some were inaccessible to workers at the oceanside complex. In addition, the time required to repair and cure the tank insulation before flight was not sufficient to allow an orderly sequence of work prior to the time *Discovery's* flight would have had to yield to the launch of *Atlantis*.

NASA managers reviewed the

readiness of *Atlantis* for the STS-71 mission last week, but decided not to set an official launch date until about Tuesday. That will give the Mir 18 cosmonauts time to complete the reconfiguration of the space station. The three cosmonauts, including U.S. astronaut Norm Thagard, have been aboard the Russian outpost since March 16. *Atlantis* is still targeted to launch around June 24, with an option to move the launch up by about two days if the Russians are ready earlier for *Atlantis'* historic docking.



Because of the woodpecker incident, the mantle of the 100th U.S. human space flight falls to the STS-71 crew. Commander "Hoot" Gibson, Pilot Charlie Precourt, Mission Specialists Ellen Baker, Greg Burch and Bonnie Dunbar and Russian cosmonauts Anatoly Solovyev and Nikolai Budarin were reflective as they discussed their upcoming mission with reporters during a preflight news conference at JSC last week.

"We know we are heading into a mission which will carry great significance, not only for this year but for the future of joint operations between the U.S. and Russia," Gibson said.

Please see **DISCOVERY**, Page 4

# Thagard shatters American flight duration record

Astronaut Norm Thagard Tuesday broke the U.S. single flight duration record on board the Russian Space Station Mir as preparations continued for the cooperative shuttle/Mir docking mission later this month.

Thagard, along with crewmates Vladimir Dezhurov and Gennady Strekalov, was launched to the Russian Mir Space Station on a Soyuz rocket on March 14, and arrived at Mir two days later. As of June 6, he has spent 85 days in space. Depending on the actual launch of *Atlantis*, he will spend more than 110 days in space.

The previous record was 84 days set by Gerald Carr, Edward Gibson and William Pogue on the Skylab 4 mission from Nov. 16,

1973, to Feb. 8, 1974.

In recognition of the achievement, Thagard took a break from his mission activities to participate in a press conference.

"I am happy to have had the opportunity to do this," Thagard said. "I think Ed Gibson and those guys on the last Skylab crew in a way did a lot more than I am doing. They were pioneers, at the time they did what no one else had done it. At this point in time a lot of folks have been in space this long. There was a man here when I got here that had been here 14 1/2 months."

"I hope that what this means is that its the



beginning of an era which Americans will spend long periods of time in space," Thagard said.

Thagard said he seems to have no ill effects from the long duration mission and that he maintains his aerobic capacity and is confident he will have no problems when he returns to Earth.

Also on Mir, the Spektr module was docked in its final position at the minus-Y axis at approximately 3 p.m. JSC time last Friday. Spektr arrived at Mir as scheduled on May 31 at approximately 7:58 p.m. without any problems. However, during work Monday night, only one of Spektr's two

auxiliary solar array panels were unfurled. The Mir 18 crew subsequently sent a video recording of the deploy which showed one of the arrays not fully extended. Solar array specialists were on hand at the Kaliningrad Mission Control Center to view the tape, analyze the situation, and make recommendations.

The Mir 18 crew also has been busy making connections between the Mir and the Spektr and conducting tests of the ventilation system and leak checks of the module. In addition, they have been unloading the Spektr module and configuring it for science gathering.

The Spektr module is designed to study the Earth's natural resources, atmosphere and the

Please see **CREW**, Page 4

## NASA'S X-ray explorer shipped to launch site

The X-ray Timing Explorer spacecraft was recently shipped to its launch site in Florida from the Goddard Space Flight Center. When it is launched this August, XTE will gather data about X-ray emitting star systems and other sources within the Milky Way galaxy and beyond.

The satellite has completed its environmental testing program and is being flown to the Cape Canaveral Air Station launch site by an Air Force C-5 aircraft from Andrews AFB in Maryland.

The 6,700-pound spacecraft currently scheduled for launch Aug. 31 aboard a Delta II Expendable Launch Vehicle was integrated and tested at Goddard. After several months of preparing the X-ray observatory for flight in Florida, XTE will be launched into a 360-mile low-Earth orbit.

Spacecraft engineers and scientists from the three XTE instrument teams gathered at Goddard this month for a final rehearsal of mission operation activities before shipping

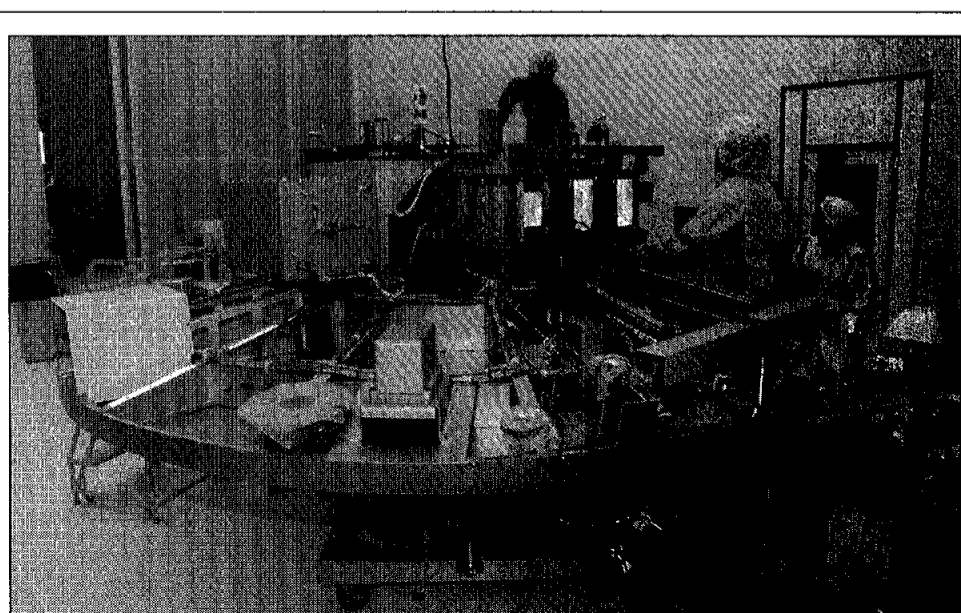
the spacecraft to the launch site. The instruments are being provided by science and engineering teams at Goddard, the University of California at San Diego, and the Massachusetts Institute of Technology.

"It is great to see the whole spacecraft shipped to the Cape after several years of pulling the different pieces together," said Dale Schulz, project manager for the XTE mission.

"XTE will carry three instruments for studies of the variable X-ray sky: the Proportional Counter Array, the High Energy X-ray Timing Experiment and the All Sky Monitor," said Dr. Jean Swank, project scientist for the XTE at Goddard. "A two-year prime mission is scheduled, with extended operations for four to five years possible."

"XTE will carry out in-depth timing and spectral studies of X-ray sources across a wide range of X-ray energies to answer questions about collapsed compact stars—white dwarfs, neutron stars, and black holes and

Please see **X-RAY**, Page 4



**ELECTRONIC LAB**—Payload workers prepare the Wake Shield Facility for its flight on *Endeavour* on STS-69 scheduled to liftoff later this summer. The free-flying experiment platform is primarily designed to generate an "ultra-vacuum" environment to grow and process thin films for the next generation advance electronics. The side of the dish shaped satellite facing up is the ram side that includes the avionics platform.

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.

**Loving Feelings Concert:** 7 p.m. Sept. 30 at the Summit. Tickets cost \$32.50.  
**Schlitterbahn:** Tickets cost \$17.80 for adults and \$15.30 for children 3-11.  
**Seaworld:** Tickets cost \$23.50 for adults and \$16.25 for children 3-11.  
**Astroworld:** One day pass cost \$18.10.  
**Splashtown:** Tickets cost \$11.05.  
**Six Flags:** Tickets cost \$23.70 for a one day pass, \$31.75 for two day pass and \$20.30 supersaver not valid on weekends in June, July and August.  
**Fiesta Texas:** Tickets cost \$20.35 for adults and \$15.80 for children 4-11 and senior citizens over 55.  
**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; Sony 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:** Country and Western Dance July 29 at the Gilruth. Tickets cost \$12. Ringling Bros. Circus July 22 at the Summit.

JSC

# Gilruth Center News

**EAA badges:** Contractors, 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. June 14 and June 29. Pre-registration is required. Cost is \$5.

**Defensive driving:** Course is offered from 8:15 a.m.-3 p.m. Saturday. Next class is June 10. 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.

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

**Sailing class:** NASA Sailing Club will hold classes from 9 a.m.-noon Saturdays in June. For more information call Richard Hoover at 996-7716.

**Golf lessons:** Lessons begin June 24 or 27. Cost is \$100 for six weeks.

**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.

**Aerobics:** Class meets 5:15-6:15 p.m. Tuesdays and Thursdays. New class begins June 13. Cost is \$32 for 8 weeks.

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: Webster condo, 2-2-2CP, FPL, ceiling fans, mini blinds, new dishwasher, refrigerator, W/D conn, \$39.9k. x47513 or 280-0285.

Sale: Canyon Lake, Village West, 3-2, .25 acre, satellite, gazebo, waterfall, \$130k. 210-899-3447.

Rent: Galveston condo, furniture, sleeps 6, Seawall Blvd & 61st St, weekend/weekly/daily rates. Magdi Yassa, 333-4760 or 486-0788.

Sale: Golfcrest, Pearland, custom 3-3-3 on golf course, plush, WBFLP, spa, ex cond, priced below appraised value. 481-1469.

Sale: Time share in Acapulco, 1 week RCI member, \$2.5k. x37128 or 335-5357.

Rent/Sale: Waterfront condo 201A, Cape Royale, Lake Livingston, 2-2, sleeps 6, wkly/wkend rates. Barbara, 337-1494 or 1-800-364-2256.

Lease: Barringer Way condo, 2-1, W/D conn, pool, storage area, ex cond, no pets, \$495/mo. 486-2048.

Lease/Sale: University Trace, Clear Lake area, 2-2.5-2 condo, 2 story, FPL, appliances, \$725/mo, sale price negotiable. 488-8668.

## Cars & Trucks

'78 Porsche 924, 1 owner, good cond, A/C, sunroof, \$3k/obo. John, x49816 or 486-0097.

'93 Nissan Sentra XE, limited edition, 4 dr, std, pwr options, cruise, 22k mi, ex cond, \$8.5k obo. Dilhar, 488-2449 or 480-3233.

'80 GMC Sierra Grande, half ton pickup truck, AM/FM/cass, \$1.5k. 482-2741.

'77 Ford Bobcat, engine needs work, good body, trans/tires/etc, \$100 obo. x36461 or 337-9218.

'91 Corvette, black, black interior, 42k mi, 6 spd, adjustable performance handling pkg, AM/FM/cass Bose stereo, 6 way pwr seats, warning system, \$22k obo. Tonu, x30699 or 286-2937.

'84 Dodge PU, rebuilt motor, new tires/brakes, P/W, excellent transportation, \$2.2k obo. 291-9401 or 534-3418.

'64.5 Mustang, red, 289, looks and runs good, \$3.3k obo. 486-0972.

'82 Pontiac Gran Prix, \$650 firm. Joe, 409-948-4931.

'87 Hyundai Excel GLS, 4 dr, 5 spd, fair cond, good body, ex gas mileage, \$850. Sam, x33207.

'84 Mazda RX7 GSL-SE, 5 spd, sunroof, pwr windows, stereo cassette, leather interior, 99k

mi, needs repair, \$1.5k. x38835 or 482-5531.

'89 Olds Cutlass Supreme, very good cond, loaded, 66k mi, 45.4k obo. Jim, 991-0533.

'84 Toyota Corolla SR5, 2 dr, hatchback, 5 spd, air, ex cond, \$2.5k. Mae, x32929 or 480-6913.

'85 Honda Accord, 4 dr, auto, air, 100k mi, ex cond, \$2.7k. Mark, x36126 or 326-1192.

## Cycles

'94 Yamaha YZF750R. 821-4810.

'83 Yamaha SECA 400, mint cond, low mileage, rebuilt carb, new battery, tune-up, \$1.4k. 244-5106 or 996-0339.

## Boats & Planes

'78 Glaston 20', 200 Johnson Cuddy Cabin boat, motor & trailer, \$3.5k. 489-9401.

'88 Searay, 18', pwr trim/tilt, galvanized trailer, equipped for skiing, steel prop, ex cond, Rich, 532-1673.

Catamaran sailboat, 22', sleeps 3, stove head, 9.9 hp, 4 stroke Yamaha, VHF. x37124 or 335-5357.

Sovereign, 24', ex cond, extra jib, depth sounder, head, stove, electric starter johnson PB, recent bottom job, Mike, 383-2787 or 286-1691.

Laser 2 sailboat w/trailer, spinnaker rigged, trap, vests, \$1.1k obo. x41095 or 486-8185.

'88 Invader, 210 cuddy cabin, I/O 200Hp Merc, galvanized trailer, loaded great condition. 997-6141.

'93 Crownline inboard/outboard w/5.7 liter OMC engine, 20', depth finder, auto halon fire ext, McClain galvanized trailer, \$13.9k obo. Bob, 244-4431 or 286-9902.

Sunfish sailboat complete, \$40; boat bumpers, \$5; Chrysler O/B starter, 60 to 100 hp, \$10. 332-2453.

## Audiovisual & Computers

Citizen printer, "CSX-140" w/GSX color option, \$199. Magdi Yassa, 333-4760 or 486-0788.

486DX2/66, 8Mb, 528 HD, SVGA, Sound Card, fax/MDM, \$1.2k. x35549 or 554-7104.

MacPerforma 550, 10Mb RAM, 160Mb HD, CD-ROM drive, hi resolution Sony monitor, sys 7.5, lots of S/W, \$925/obo; MacPerforma 405, 8 Mb RAM, 80 Mb, disk, modem, 14" color monitor, keyboard, mouse, System 7.5, business & games, S/W, Imagewriter printer, \$750. 735-0381 or 280-7432.

Excel 3.0 S/W for Mac complete kit, \$20; Image Assistant software for Mac color image editing, \$20. 486-8786.

AT&T-6300, color monitor, green monitor, 30 Mb HD, Hayes 1200 baud modem, Epson FX-80 printer, math co-processor, computer workstation, \$225; Fisher tower/floor speakers, 14" woofers, 4" mid-range, 3" tweeters, 10 - 100 watts, shielded for use by TVs, stereo/amp, cas-

## Today

**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.

## Monday

**Cafeteria menu:** Special: breaded cutlet. Total Health: crispy baked chicken. Entrees: stir fry pork and rice, baked chicken, smoked sausage with German potato salad, French dip sandwich. Soup: cream of broccoli. Vegetables: okra and tomatoes, peas, navy beans, baby carrots.

## Tuesday

**Cafeteria menu:** Special: fried chicken. Total Health: vegetable lasagna. Entrees: Salisbury steak, steamed pollock, vegetable lasagna, French dip sandwich. Soup: split pea and ham. Vegetables: mixed vegetables, French cut green beans, pinto beans, vegetable sticks.

## Wednesday

**SSFF meets:** The Space Station Future Fighters will hold a joint meeting with the National Space Society at noon June 14 at the Freeman Memorial Library at 16602 Diana. Individuals interested in either organization are invited to attend. For information call David Cochran at 335-0185.

**PSI meets:** The Clear Lake/NASA Area Chapter of Professional Secretaries International meets at 5:30 p.m. June 14 at the Holiday Inn on NASA Road. For additional information, contact Elaine Kemp x30556.

**MAES meets:** The Society of Mexican American Engineers and Scientists will meet at 11:30 a.m.

June 14 in the executive dining room in the Bldg. 3 cafeteria. For more information call Michael Ruiz at x38169.

**Astronomy seminar:** The JSC Astronomy Seminar will meet at noon June 14 in Bldg. 31, Rm. 129. An open discussion meeting is planned. For more information, call Al Jackson at 333-7679.

**Toastmasters meet:** The Space-land Toastmasters will meet at 7 a.m. June 14 at House of Prayer Lutheran Church on Bay Area Blvd. For additional information, contact Elaine Trainor, x31034.

**Cycle club:** The Space City Cycle Club will meet for a 25-mile ride beginning at 6 p.m. June 14 at the University of Houston Clear Lake soccer field. For more information on this ride and weekend rides call Mike Prendergast at x45164.

**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.

**Cafeteria menu:** Special: stuffed bell pepper. Total Health: baked potato. Entrees: stir fry chicken & rice, wieners & beans, fried fish, western special, beef, chicken sausage, Reuben sandwich. Soup: seafood gumbo. Vegetables: buttered rice, Italian green beans, corn O'Brien, peas and carrots.

## Thursday

**Cafeteria menu:** Special: barbecue smoked link. Total Health: roasted turkey breast. Entrees: turkey and dressing, beef stroganoff, steamed pollock, French dip sandwich. Soup: tomato Florentine. Vegetables: Spanish rice, lima beans, buttered squash, oriental vegetables.

## Friday

**Juneteenth picnic:** The NASA/JSC Black Cultural Association will host its annual Juneteenth Scholarship Picnic from 11 a.m.-7 p.m. June 16 at the Gilruth Center West Pavilion. Tickets cost \$10 for adults and \$5 for children under 12. Deadline for ticket purchase is June 14. For more information call Mark Falls at x38627 or Jackie Wilson at x30278.

**Cafeteria menu:** Special: meat sauce and spaghetti. Total Health: baked potato. Entrees: rainbow trout, liver and onions, beef cannelloni, ham steak, fried cod fish, Reuben sandwich. Soup: seafood gumbo. Vegetables: steamed broccoli, breaded okra, cut corn, black-eyed peas.

## June 20

**NAT meets:** The National Technical Association will meet at 6:30 p.m. June 20 at Texas Southern University School of Technology Rm. 316. For more information call Carrington Stewart at x31404.

## June 21

**Astronomy seminar:** The JSC Astronomy Seminar will meet at noon June 21 in Bldg. 31, Rm. 129. An open discussion meeting is planned. For more information, call Al Jackson at 333-7679.

**Toastmasters meet:** The Space-land Toastmasters will meet at 7 a.m. June 21 at House of Prayer Lutheran Church on Bay Area Blvd. For additional information, contact Elaine Trainor, x31034.

**Cycle club:** The Space City Cycle Club will meet for a 25-mile ride beginning at 6 p.m. June 21 at the University of Houston Clear Lake soccer field. For more information on this ride and weekend rides call Mike Prendergast at x45164.

range, needs repair, \$100; dishwasher, \$80; microwave, \$50; 19" color TV, \$75. 554-6892.

Ranch-style wood frame sofa, \$125; velour modern-style sofa, \$300; 5 wrought-iron bar stools, \$75. Janine, x45084 or 482-7550.

Kenmore washer, Frigidaire gas dryer, multi-cycle, heavy duty, good cond, \$300/pr. 532-1725.

Natural solid wood table w/butcher block laminate top, 4/chairs, \$100. Jeff, x31975 or 286-1935.

Rust colored rattan & glass dinette set, fabric & rattan chairs to match, \$150. x49745 or 585-1031.

Coffee table & 2 end tables, black lacquer, \$80. x36309 or 474-9747.

Karastan Sarouk rug, 12'x8.5', red/navy/teal, \$800; antique pie safe, opalescent inlaid glass, \$400; sofa & loveseat, off white, coarse fabric, \$350. 338-7329.

Loves seat, brown velour print, good cond. 244-0250 or 941-3262.

Gas dryer, Sears Kenmore Advantage, 5 cycle w/auto dryness sensor, whit ex cond, \$260. 532-2147.

## Wanted

Want garage door opener; baby jogger; small dirt bike under 100 cc, any condition. 332-9105.

Want "liftback" to fit '83 Honda Civic station wagon, good cond w/little or no rust. 283-9500, x509 or 486-9605.

Want personnel to join vanpool, departing Southwest parking lot at 6:50 a.m. for JSC & offsite locations, 7:30 a.m. - 4:30 p.m. shift. Susan Gaynor, 282-5447 or Ed, x36124.

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

Want temporary housing for N/S family of 5, from 6/17 - 8/7. Denise, 903-297-6176 or 903-753-0131.

Want personnel to join VPSI van pool from Sugar Land & Southwest Houston to NASA area. Alice, x35234.

Want donations for needy family w/infants, toys/clothes up to 6x sz, n/bo. Bea, x31094 or 948-0282.

Want low priced school/work car or truck. 271-7011.

Want bass guitar and/or matching amp. Barbara, 554-6200.

Want to buy/trade, 15' boat trailer with 17'. 282-3118 or 480-7138.

Want 4 drawer filing cabinet, good cond. 554-7769.

Want singers for JSC American Heritage Day chorus, 7/7/95, call Pat Burke, x30606.

Want Town Criers for American Heritage Day, 7/7. x36080.

Want 2 GB radios and antennas in working condition. 532-2147.

Want to purchase home, 3-2-2, det garage, in CLC, need 9/15/95, to \$75k. 484-5860.

## Miscellaneous

Portable 5 person Morgan spa/hot tub, \$975. Tim, x33791 or 482-2308.

Timing light, \$20; Vent-A-Hood, \$20; music box, oriental design, \$10; brass spittoon, \$15; Checkwriter-Paymaster, \$25; electric ice cream mixer, \$10; 2 gal ice tea dispenser, \$10; TV stand, portable, \$10; cash register, tape receipt, \$175; baby bed w/mattress/bumper pad, \$85; baby carriage, maroon velour covered, \$45. 488-5564.

Dog kennel, all metal, portable, 10x20, 4350. 532-4237.

Bike, tri spoke Ultra Light composite racing rims by Dupont for specialized new clincher type front & rear Wir cassette, new \$1.1k sell \$550 obo. 464-8694.

Bally's President & First Lady Gold Lifetime membership, paid thru 5/96, \$500. x38385.

Exercise cycle, tension wheel & speed gauge, ex cond, \$25. 333-3700.

Lawnmower, Murray, ex cond, very basic, \$45. 480-4554.

Rear sun shield for Bronco II, \$45; surf board, \$75; exercise stepper \$25; brass & glass table, \$10; electric weed eater, \$10; hanging lamps, \$10/ea. 488-3238.

Above the ground pool, 24x48, chemicals 7 accessories included, \$1.8k. 472-7345.

'84 Olympic first day cover stampset, ex cond, in original collectors case, 475. 486-8716.

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

Car cover, medium, for car 14' - 15' in length, \$30. Mike, 333-2335.

Standard used truck tires, 2, 235-75-R15, \$10/ea. x32507 or 488-3314.

The Step, step circuit trainer, 4" - 8" increments, video tape included, \$50. Patti, 280-2408.

Pool table, 8', accessories included, \$500/obo. Debbie, 334-59897.

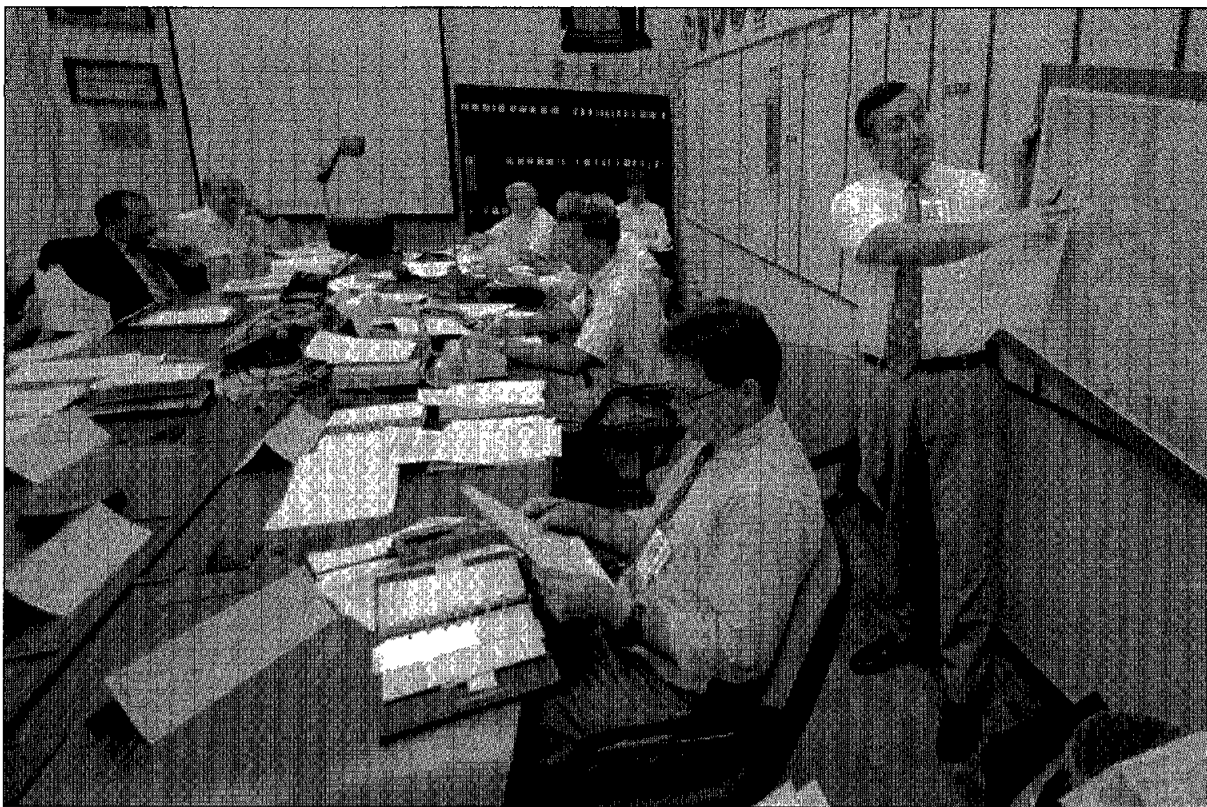
Draw Tite trailer hitch assy for Ford Taurus, \$50; stainless steel propellers for Johnson, Evenrude V6 outboards, \$100. 332-9105.

Golf clubs, Golfsmith, woods D,3,4,5; irons 2 - SW, \$200. x30186 or 333-7029.

Super single waterbed-n-headboard, \$100 obo; 6' sliding glass door, \$50/obo; 2-32" interior doors, \$10; small trolling motor, \$15; 2 Goodyear 255-R15 tires, \$10/ea; 36" storm door, \$30. 332-2453.

Winchester shot gun, 12 gauge semi auto model #1400 MKII, \$250. Jim, 991-0533.

Valspar Concrete stain, 2 gallons, Storm Cloud color, \$10/gal. Will, x31971.



# Hurricane Harbinger

## Heavy rains, flooding provide strong reminder for hurricane preparedness officials at JSC

Last week's heavy rains and flooding gave JSC emergency preparedness officials a strong reminder of why they need to get their ducks in a row as the Gulf Coast enters the 1995 hurricane season, which officially started just two days later on June 1.

And as if that wasn't enough impetus, this week's landfall of Hurricane Allison in Florida provided yet another reminder of why it is important to prepare.

"Hurricane season is not the time of year that people look forward to, but along the Texas Gulf Coast, we prepare, plan ahead, and brace ourselves," said Bob Gaffney, JSC's emergency preparedness coordinator. Bill Roeh, chief of the Plant Engineering Division and captain of the JSC Hurricane Rideout Team, has primary responsibility for preparing the center when severe storms threaten.

Roeh and Gaffney work with JSC Emergency Preparedness Manager Keith McQuary to ensure that the comprehensive preparedness plan is published every year and implemented. That means coordinating the work of Area Protection Teams and the emergency planning representatives in every organization, and keeping emergency supplies ready through the Support Operations Division and its contractor, Pioneer Contract Services.

At Action Level I, which became effective June 1, the center is in a continual state of readiness under JSC's Severe Weather Plan. At this level, personnel assigned to implement the hurricane and severe weather plan assess, review and prepare their strategies. Level I ensures that JSC will have a full stock of rations and supplies to support the next level of activity.

Action Level II goes into effect if a hurricane could threaten the Clear Lake area. At the discretion of Center Operations Director Jim Hickmon, the Emergency Action Center is opened in Bldg. 30, Rm. 225. Each JSC organization has a designated Emergency Planning Representative and an alternate who stay informed of the status of the action levels

during a hurricane watch and distribute information on preparing for a hurricane.

Once the likelihood of a hurricane striking in the Houston-Galveston area grows great enough, JSC Director Dr. Carolyn Huntoon will decide whether to release all non-essential employees and close the center.

Action Level III starts when the decision to close the center is made. Information concerning work assignments and closing JSC will be delivered to employees through their organization's EPR.

"An important part of preparing the center for closing because of a hurricane threat is securing offices, a responsibility that falls upon every employee," McQuary said. "Each employee should secure his or her individual work area, which includes unplugging computer terminals and covering them with plastic bags. These bags are available from the Support Operations Division. Additional office preparations include raising venetian blinds to prevent additional wind damage should windows break, securing classified information and other important materials in safe, dry places and closing all doors."

A group of about 13 area protection teams from Plant Engineering readies JSC's grounds and NASA facilities at Ellington Field, for a storm—by checking buildings and roofs, picking up loose objects outside and

securing possible hazards.

"The main thrust should be on preparation; those things that all employees can do to mitigate the effects of a storm or minimize the degree of damage they can do," Gaffney said. "Preparation is key to successful recovery;

we'll recover regardless, but our recovery will be faster if we prepare adequately in advance."

The first step is awareness, Gaffney said, and toward that end the JSC Emergency Preparedness Office sponsored a hurricane workshop for employees last Friday in Teague Auditorium. The program included speakers from the National Weather Service, and provided information on JSC's program to protect employees and facilities, as well as information on personal disaster survival plans. All employees were invited to attend and Gaffney said it was especially useful to Gulf Coast newcomers. The JSC

Television Office videotaped the program, which will be edited and broadcast on JSC Television whenever a hurricane enters the Gulf of Mexico.

Although emergency preparedness workers are responsible for taking care of JSC first, the center can pitch in and help in the community on a case-by-case basis. Sharing information with the community about the center's plans will help community leaders know what kind of help may be available from JSC.

Level IV starts when the storm hits. Prior to Level IV, Roeh gathers the Rideout Team members at their posts and waits for the storm to subside. Activities during the storm are limited to only essential emergency repairs that can be performed without endangering personnel.

The Rideout Team goes back into action once the storm passes, assessing the damage and arranging for necessary repairs. In the event of a center closing, employees can continue to stay in contact with the center through the use of two recorded phone services.

The Employee Information Service, x36765, provides information about closings, and the Emergency Information Line, x33351, provides potential storm information, plans for safe-guarding work areas and information throughout the year on other area emergencies. The center director is kept informed of the center's recovery status by the Rideout Team Captain. Public Affairs notifies employees when to return to work through the information services and radio and television reports.

Gaffney encouraged employees to make plans for their personal protection well in advance of the development of any tropical storm.

"Now would be a good time," he said. Personal protection plans should anticipate the arrival of tropical storm-force winds ten hours or more before a hurricane makes landfall and expect the same wind field on the backside of the hurricane. People who don't evacuate in the face of a severe storm could be isolated in their homes for an extended period of time before public safety officials declare the immediate emergency has ended.

Employees should assess the vulnerabilities of their home and contents and develop firm plans for transportation and shelter with their families. They should contact their community's emergency management representatives about whether they are likely to be affected by a storm surge and stock up on emergency supplies. □

### Hurricane Warning Checklist

- ✓ Unplug office machines, and computers
- ✓ Cover computer terminals with plastic bags
- ✓ Raise venetian blinds
- ✓ Store classified information in safe, secure, dry place
- ✓ Store important papers in safe, dry place
- ✓ Close all doors

### Important Numbers

- JSC Emergency Information ..... x33351
- JSC Employee Information Service ..... x36765
- JSC Emergency Reporting ..... x33333
- Ellington Fire ..... x47231
- Ellington Ambulance ..... x47231
- Greater Harris County Emergency Network .... 911
- Red Cross Shelter ..... 526-8300
- Houston Lighting & Power ..... 228-7400
- Entex Gas ..... 659-2111
- GTE ..... 800-843-4345
- Southwestern Bell ..... 881-8181

### Emergency Supply Kit

- Flashlight
- Tissues
- Radio
- Pocket Knife
- Sanitary Supplies
  - Toothbrush
  - Soap
  - Shampoo
  - Sponge
  - Cleanser
  - Bleach
- Batteries
- Pencils
- Drinks/Juices
- Nuts
- Rice - Pastas
- Soups
- Canned Foods
- Water (1 gal per person per day)

### 30-gallon trash barrel

- First Aid Kit
- Medicines
- Rubbing Alcohol
- First Aid Handbook
- Towels
- Blankets
- Paper Towels
- Toilet Paper
- Candles
- Matches
- Can Opener
- Peanut Butter
- Crackers
- Dried Beans
- Change of Clothing
- Foul Weather Gear
- Sterno, Stove, Fuel
- Garbage Bags
- Cooking Utensils
  - Cooking Pot
  - Plastic Dishes
  - Silverware
  - Aluminum Foil



JSC Photo by Mark Sowa  
 Top: The Hurricane Ride Out Team conducts an exercise in Bldg. 30 to help prepare for an actual event. From left, Joe Olivarez of the Security Division, Ken Hill of Mason-Hanger, Dave Mays of Allied Signal, Joyce Mason of Kelsey-Seybold, Bill Roeh of the Plant Engineering Division and Gary Jackson of the Test, Operations and Institutional Safety Branch take notes as Bob Gaffney, standing, gives the status of the hurricane.

Right: JSC employees can make a home emergency supply kit by filling a 30-gallon plastic trash barrel with a securable lid. Food supplies should be rotated every six months. The list is not intended to be all-inclusive. Everyone must decide what supplies are best suited for their family's survival.

## Engineering gets new chief

Frank Benz was recently selected as the new Chief of the Manufacturing, Materials, and Process Technology Division in the Engineering Directorate.

Benz who has been acting in this capacity since August 1994 joins JSC from the White Sands Test Facility, where he served as chief of the Laboratories Office for the past three years. Benz received a Bachelor of Science in Chemistry in 1976 and a Master of Science in Chemical Engineering in 1981, both from New Mexico State University. He is the recipient of numerous awards, including the NASA Medal for Exceptional Engineering Achievement.

### Secretaries earn top honors

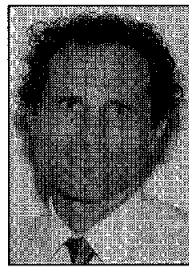
Three secretaries were recently honored for their secretarial excellence.

Maryann Cresap of the Space Flight Train-

ing Division received the Marilyn J. Bocking Award for her exceptional performance of preparing difficult foreign travel orders, working to transition old computer software to new updated material and her team spirit in dealing with other personnel in her division.

Barbara Grundman of the Legal Office received the Marilyn J. Bocking Award for her superior patience and resiliency in supporting the numerous litigation and administrative cases. Grundman was cited for her dedication to distribute and coordinate information in a timely and accurate fashion.

Carolyn Woolverton of the International Partners Office in the Space Station Program Office received the Secretarial Excellence Award for her professionalism, dedication and enthusiasm in handling managers and customers in a time-critical environment.



Benz



Cresap



Grundman



Woolverton



Smith

Woolverton's was commended for her efficient manner in handling travel arrangements, organizing shipments, assisting employees and maintaining payroll for international travelers and personnel who were relocated to Russia.

### DMS' Smith honored

JSC Director Dr. Carolyn L. Huntoon recently recognized Ester Smith of Diversified Management Services for her dedication to JSC.

Smith, an area manager, was honored for her 30 year devotion to hard work. She has

earned the respect of employees, other contractors and civil service employees.

"She has the reputation of being hard and demanding," said Arthur Callahan, project manager for DMS. "It is interesting however that employees who have been with her for any length of time do not want to be moved from the area."

Smith's knowledge of Bldg. 1 and her ability to anticipate problems has made her more than a good manager. She plays an important role in the success of the company she represents Callahan said.

## JSC workers selected to gain skills

Human Resources recently announced selections for the JSC Fellowship Program and the Project IQ Program.

Six JSC employees are to participate in the FY96 JSC Fellowship Program. This program provides one year of full-time graduate study with salary and is awarded to highly qualified employees at the center through a highly competitive application and panel interview process. Employees are chosen on the applicability of the chosen area of study and its effectiveness in contributing to JSC's mission and goals, academic record of the applicant and a written recommendation.

Employees who will begin their studies this fall include, Robert Yowell of the Systems Division; James Ortiz of the Space Flight Training Division; Steve Fitzgerald of the Navigation Control and Aeronautics Division; James Carvajal of the Automation, Robotics and Simulation Division; Timothy Cao of the Structures and Mechanics Division and Janice Yelle of the Medical Sciences Division.

The JSC Project Increased Qualifications Program provides undergraduate college opportunities to selected employees during duty hours. It helps employees improve skills and qualifications and be more productive in their present jobs. This two-year program gives participants the opportunity to attend college courses during regular duty hours up to eight hours per week. Eight applicants were selected for the program.

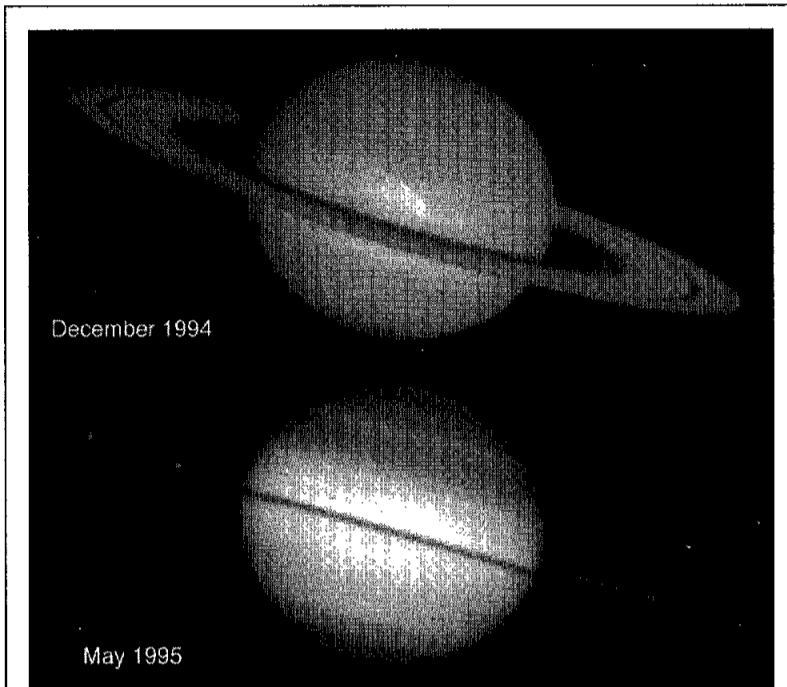
The participants selected this year are Carrie Bowers of the Human Resources Office, Linda Dunn of the Management Systems Office, Rose Sowell of the Navigation Control and Aeronautics Division, Martin Rivera of the Propulsion and Power Division, Judy White of the JSC Projects Office, Jennifer Childs of the Office of the Comptroller, Debra Eaton of the Space Station Business Management Office and Nancy Hawkins of the Customer Service Division.

## Crew prepares Mir for Atlantis

(Continued from Page 1)

area surrounding the Mir station. It also will be used for biomedical experimentation while providing additional electrical power to the station via four solar panels. The equipment includes a cycle ergometer to provide resistance exercise, instruments to measure metabolic gas analysis and human metabolism, a freezer to preserve specimens and a greenhouse to explore the fundamentals of plant and animal growth. Biomedical investigations will be carried out by Thagard, the Mir 19 crew and U.S. astronaut Shannon Lucid during her stay aboard Mir next year.

To allow enough time for unloading and setting up the Spektr module, repositioning of the Kristall module is now tentatively set for Thursday. This



**ON EDGE**—In one of nature's most dramatic examples of "now-you-see-them, now-you-don't," NASA's Hubble Space Telescope captured images of Saturn on May 22 as the planet's magnificent ring system turned edge-on as viewed from Earth. This event only occurs once about every 15 years. This observation will be used to determine the time of ring-plane crossing and the thickness of the main rings, to search for as yet undiscovered satellites and to help better determine the rate at which Saturn "wobbles" about its axis in a process known as polar precession.

NASA Photo

## Sci-Fi symposium in Teague

JSC employees are invited to a science fiction and science fact symposium to be held from 11:30 a.m.-1 p.m. next Friday in the Teague Auditorium.

The symposium sponsored by Author Services in cooperation with Rice University, is the finale to a week-long workshop for winners of the "L. Ron Hubbard's Writers of the Future" contest.

The symposium's focus is on humans in space and will feature

science fiction writers and JSC employees. Panelists include, writers, Jerry Pournelle, Larry Niven and Algis Budrys. JSC panelists include Astronaut Story Musgrave, Wendell Mendell of the Earth Science and Solar System Exploration Division and Joe Loftus, assistant director of engineering in the Space and Life Sciences Directorate.

Employees are invited to attend if workloads permit. For more information, call Steve Nesbitt at x38630.

## X-ray timing explorer to gather data on stars, black holes

(Continued from Page 1)

about very large black holes in quasars and galaxies," she said.

"The X-ray sky is highly variable. Suddenly an obscure faint star lost in the crowd can become the brightest X-ray source in the sky, revealing where a black hole is likely to be

found. Neutron stars emit beams of X-rays that sweep across our view as the stars rotate. XTE is tuned to watch the action and study it. These data will allow us to study the strongest gravitational and magnetic fields that we think exist in the universe," Swank added.

Observations of specific targets to be studied with XTE will be proposed by scientists from the United States and abroad. Selected observations will be implemented by scientists at the XTE Science Operations Center at Goddard. XTE will transmit data via two of NASA's

Tracking and Data Relay Satellites, which will then relay the data to a ground station in White Sands, N.M., and then to the SOC. Scientists can monitor observations from the SOC. Data are sent to their home institutions for detailed analysis.

## Space News Roundup

The Roundup is an official publication of the National Aeronautics and Space Administration, Lyndon B. Johnson Space Center, Houston, Texas, and is published every Friday by the Public Affairs Office for all space center employees.

The Roundup office is located in Bldg. 2, Rm. 181. The mail code is AP2. The main Roundup telephone number is x38648 and the fax number is x45165.

Electronic mail messages should be sent to the editor, khumphri@gp301.jsc.nasa.gov or the associate editor, kschmidt@gp301.jsc.nasa.gov.

Editor ..... Kelly Humphries  
Associate Editor ..... Karen Schmidt

## Discovery rolls back to VAB

(Continued from Page 1)

"We are all looking forward to seeing the Mir in front of us and seeing Atlantis make contact and a hard dock with the space station on time," Gibson added.

The flight plan calls for Atlantis to linkup to the Mir about two days after launch in the first international space docking since the Apollo-Soyuz mission 20 years ago. Waiting aboard Mir will be Commander Vladimir Dezhurov, Flight Engineer Gennady Strekalov and Thagard, who on June 6 eclipsed the mark for the longest single American space flight when he sailed into his 85th day in space, his 83rd aboard Mir. Gibson said he would have a concise message for Thagard when the hatches are opened between the two spacecraft

after docking.

"I suspect I'll say something like, 'if it isn't Normie,'" quipped Gibson, who will shake the hand of Dezhurov at the time of the historic hatch opening at the Mir's Kristall module interface.

The postponement of Discovery's mission sent Commander Tom Henricks, Pilot Kevin Kregel and Mission Specialists Don Thomas, Nancy Currie and Mary Ellen Weber back for more training. Their prime payload, the sixth TDRS in NASA's constellation of orbital relay stations, was removed from Discovery's cargo bay this week and sent back to a maintenance facility for servicing.

With Discovery's launch now set for mid-July, the STS-69 mission of Endeavour moves to the last week in July.