



Space News Roundup

Vol. 35

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No. 8

White Sands earns Gore's Hammer award

By James Hartsfield

White Sands Test Facility will be recognized for exceptional progress in reinventing government with the presentation of a Hammer Award from Vice President Al Gore's National Performance Review at 8:30 a.m. Monday, at South Shore Harbour.

WSTF has become one of the first government and industry partnerships in the world to become certified under the rigorous program of international quality control standards by the International Standards Organization. The Quality System Standards of ISO 9001, will greatly enhance the facility's preeminence in the international aerospace marketplace. The

ISO 9001 principles encompass management responsibilities, customer relations, design, calibration and testing, and they designate a common framework for production and service corporations throughout the world.

"It is just common sense that these standards that provide high quality products for the world market are good enough for our government," said Bob Stone, project director of the National Performance Review.

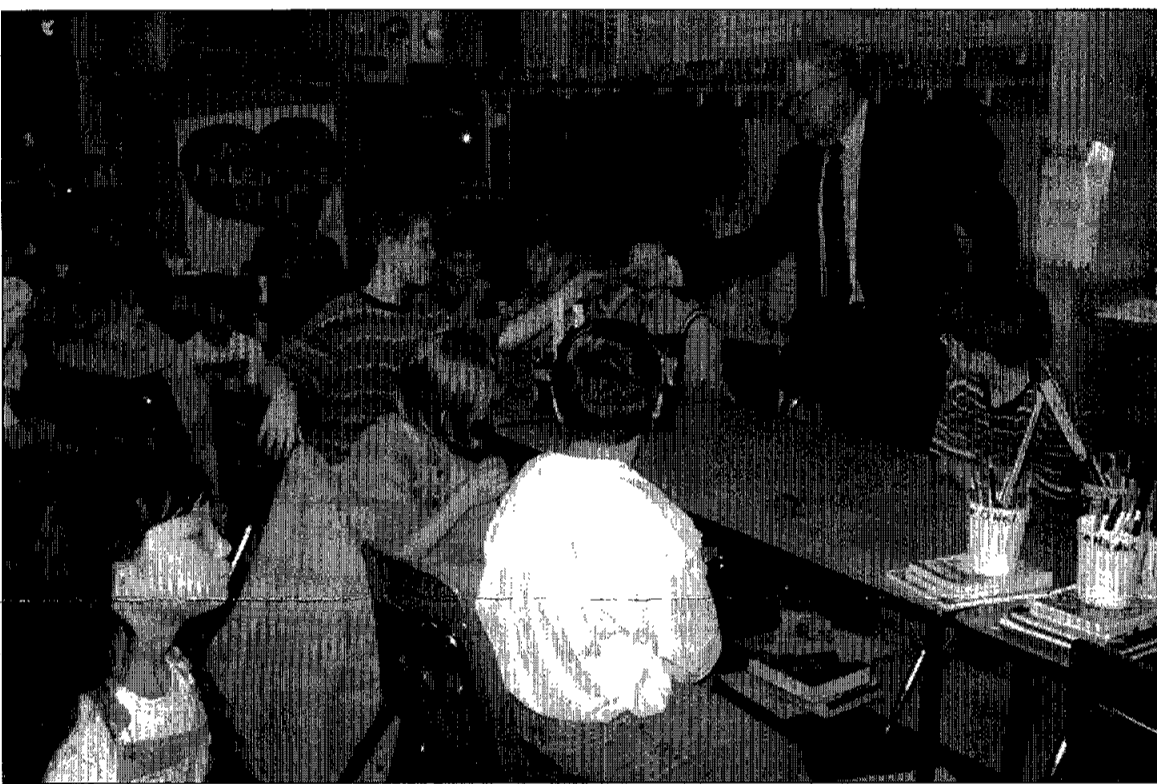
WSTF received the certification in October 1995, and shares the certification with its contractor partners, headed by AlliedSignal's

Technical Services Corp. division at WSTF. Although other government agencies and private companies have received the certification, WSTF is the first joint government and industry certification, as well as the first NASA installation to be certified.

"This achievement by WSTF demonstrates NASA's and JSC's continuing dedication to obtain the highest quality performance," said JSC Director George Abbey. "They

are to be commended for leading the way." The Hammer Award will be presented to WSTF by Stone during the opening remarks

of the Fourth Annual Conference on Quality in the Space Industry, to be held in League City March 4-5. WSTF is located 20 miles northeast of Las Cruces and employs 59 NASA civil service personnel and a team of over 480 contractor employees. The facility performs sophisticated laboratory and field tests on rocket propulsion systems and materials in potentially hazardous environments such as high-pressure oxygen and exposure to high-energy chemical rocket propellants. WSTF was built in the early 1960's to support the Apollo Program, and it has performed a crucial role in the development and operation of every U.S. human space flight program since.



JSC photo by Mae Mangieri

ENGINEERS WEEK—Space Operations Director John O'Neill talks with fifth grade students in Edi Heilig's class at Bales Intermediate School in Friendswood. O'Neill, along with more than 200 other JSC engineers, volunteered his time last week to reach out to students during National Engineer's Week.

Tethered satellite breaks away from Columbia's bay

By Karen Schmidt

Experiments performed during deployment operations of the Tethered Satellite System were surpassing scientists' expectations when the tether broke Sunday, slinging the satellite away from *Columbia*.

"We got a lot of information on tether dynamics," said Lee Briscoe, Mission Operations representative. "We learned a lot about deploying tethered satellites and we were able to verify our deployment models and procedures work."

During deployment, TSS scientists collected data on a variety of experiments including the generation of electrical current. Tether voltages as high as 3,500 volts were developed and scientists said the TSS could produce more power than they originally thought. Scientists operating electron generators obtained current

levels nearly 200 times greater than on STS-46.

"We have a lot of data in the bank from the satellite experiments," said Bob McBrayer, TSS mission manager at Marshall Space Flight Center. "There were a lot of happy people because we had science instruments that were rock solid and giving out a lot of data. The deployment was essentially smooth and the science data was more than we expected in a number of areas."

The satellite broke away from *Columbia* about 7:30 p.m. CST Sunday as it was nearing the full extent of its 12.8 mile deployment. The tether had been switched to a passive mode and there was no electrical current flowing at the time of the break. Lead Flight Director Chuck Shaw said Commander Andy

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Low, Meade leave to pursue aerospace careers

By Kyle Herring

Astronauts David Low and Carl Meade have left the astronaut corps to pursue other aerospace careers.

Low left NASA Feb. 20 and will join Orbital Sciences Corporation's Launch Systems Group in Dulles, Va. Meade left at the end of the month and will join Lockheed Skunk Works in Palmdale, Calif., as the X-33 deputy program manager. The project is an effort between civil aerospace companies and NASA to develop a potential next-generation reusable launch vehicle.

Low became an astronaut in June 1985. He has held a variety of technical assignments including work on the remote manipu-



Low

lator system extravehicular activity and orbiter test and checkout tasks at the Kennedy Space Center. In 1994 he served as the manager of the EVA Integration and Operations Office, and in 1995 he served as an assistant in the NASA Legislative Affairs Office where he worked with Members of Congress and their staffs to keep them informed about NASA's aeronautics and space programs.

A veteran of three space flights, Low has logged over 714 hours in space, including nearly six hours on a space walk. He was a mission specialist on STS-32 in 1990 when the crew successfully deployed the Syncom IV-F5 communications satellite. On STS-43 in

1991 crew members deployed the fifth Tracking and Data Relay Satellite. Low was the payload commander on STS-57 in 1993 and the primary objective of this flight was the retrieval of the European Retrievable Carrier satellite. During the mission Low, along with crew mate Jeff Wisoff, conducted a 5-hour, 50-minute space walk during which the EURECA communications antennas were manually positioned for latching.

Meade became an astronaut in July 1986. He has held a variety of technical assignments including verification testing of flight software in the Shuttle Avionics Integration Laboratory, crew escape flight tests, orbiter ground



Meade

egress tests and launch support duties, both at the Kennedy Space Center and at the Vandenberg Launch Site. Prior to STS-38 and after STS-50, Meade was the Astronaut Office representative to the Solid Rocket Booster Program and the Space Shuttle Main Engine Program at Marshall Space Flight Center.

A veteran of three space flights, Meade has logged over 712 hours in space. He served as a mission specialist on STS-38 in 1990 a Department of Defense operations flight, STS-50 in 1992 carried the first United States Microgravity Laboratory, and STS-64 in 1994 when Meade performed the first untethered space walk in 10 years.

Two new incentives added to Careers Plus+ program

Employees eligible for retirement now have two more choices under the Careers Plus+ Retirement Incentives Program.

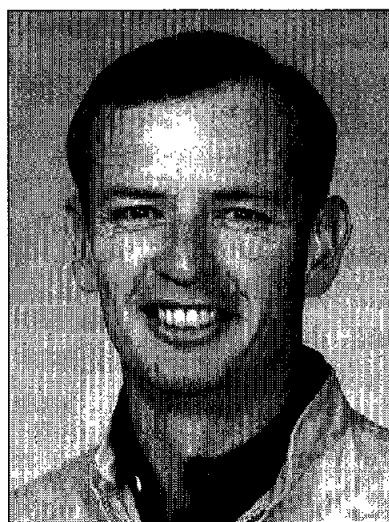
A totally new option—"Partners in Technology"—has been added and the existing "Partners in Education" option has been expanded to cover teaching positions in high schools. Like the other options in the Careers Plus+ program, only permanent JSC employees eligible for early or optional retirement may participate.

"Partners In Technology" encourages employees to take an active role in transferring NASA technology

to the private sector. Employees identify inventions or technologies with potential commercial applications and work through the Technology Transfer and Commercialization Office to obtain an exclusive license, normally a four to six month process.

If the license is approved, employees then immediately retire and work with a JSC sponsored "technology incubator" which provides assistance in writing a business plan, developing a marketing strategy, applying for venture capital

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Brian Duffy

Astronaut Duffy becomes new JSC associate director

JSC Director George Abbey has appointed veteran astronaut Brian Duffy associate director of the center, effective immediately.

Duffy will assist Abbey in the direction and management of JSC's resources, functions, and programs and projects assigned to the center.

Duffy received a Bachelor of Science in Mathematics from the United States Air Force Academy in 1975 and a Master of Science in Systems Management from the University of Southern California in 1981. He entered the Air Force in 1975 and joined NASA in 1985 as

an astronaut. He was the pilot of both STS-45 in March 1992 and STS-57 in June 1993, and the commander of STS-72 in January 1996. He has also served in numerous key management positions, including director of F-15 tests while in the Air Force, spacecraft communicator on several missions, and technical assistant to the director of Flight Crew Operations. Duffy has received numerous awards, including three NASA Space Flight Medals, the DoD's Superior Service Medal and Meritorious Service Medal, and the USAF's Commendation Medal.

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.

Hockey: Houston Aeros vs Detroit Vipers 6 p.m. April 14 at the Summit. Tickets cost \$12.50.

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

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

Stamps: Book of 20, \$6.40.

Gold C books: \$10.

Entertainment 96 books: \$30.

Certificate books: Order popular brand coffees and cereals by mail and receive substantial discounts. Booklet cost \$30.

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

Metro tickets: Passes, books and single tickets available.

Upcoming events: Book sale 8 a.m.-3 p.m. Feb. 27-March 1 in the Bldg. 3 Cafeteria.

JSC

Gilruth Center News

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.

Fitness Challenge: 1996 Fitness Challenge runs from March 1-Aug. 31. Employees are eligible to win \$100 gift certificates. For more information call Larry Wier at x30301.

Softball: Registration for spring season will be from Feb. 26-March 1.

Defensive driving: One day course is offered March 9. Cost is \$25.

Stamp club: Meets at 7 p.m. every 2nd and 4th Monday in Rm. 216.

Aerobics: Classes meet at 5:30 p.m. Monday, Tuesday, Thursday and Friday and 9:30-11 a.m. Saturdays. For more information call Jill Hill at 480-0509.

Women's self defense: Martial Arts training for women only from 5-6 p.m. Tuesdays and Wednesdays. Cost is \$25 a month.

Weight safety: Required courses for employees wishing to use the weight room are offered from 8-9:30 p.m. March 14 and March 28. Pre-registration is required. Cost is \$5.

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. Wednesday. 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.

Country and Western dancing: Beginner class meets 7-8:30 p.m. Monday. Advance class meets 8:30-10 p.m. Monday. Cost is \$20 per couple.

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

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: League City, 3-2-2, 3 acres, barn, pond, lots of trees, \$150k. 554-6138.

Sale: Waterfront lot, .5 acres on Dickinson Bayou, recent bulkhead, wooded, \$75k obo. x31370 or 334-7412.

Sale: CLC Oakbrook, 3-2-2, quite cul-de-sac, lg lot, trees, move-in cond, \$87k. 488-4069.

Sale: Webster condo, 2-2-2cp, upstairs flat, new A/C, solar screens, kitchen and bath upgrades, FPL, 4 ceiling fans, w/d connections, \$38.5k. 280-0285.

Sale: Sterling Knoll, 3-2-2, FPL, pool approx 1.3k sq ft, \$73k. x32264 or 488-5962.

Sale: 130 cleared acres, 5 pastures, 15 mi east of Tyler, horse, hay and horse barns, all amenities. 488-5058.

Sale: Laporte/Creekmont, 3-2-2, FPL, new roof, carpet, linoleum, paint, \$66.5k. 992-5080.

Sale: Sycamore Valley, 3-2-2, gas, new roof, solar screens, fans, kids playhouse, \$76.8k. x34046 or 484-2971.

Sale: Southbelt area, 3-2-2 on lg cul-de-sac, new roof, A/C and heat, alarm system, covered patio, deck, landscaping, \$73.5k. 484-2192.

Sale: Tomball area, 1+ acre wooded lot, paved streets, electricity, water, restricted residential, clear running stream, \$8k, terms. 333-4609.

Rent: Crystal Beach, beach house, fully furnished, ocean view, sleeps 10, cable TV, FPL, wknd/wkly. 486-1888.

Sale: Alvin, 10 acres, cleared, new barn, partially fenced. 532-4237.

Cars & Trucks

'90 Aerostar XLT, extended length, front and rear A/C, Michelin tires, ex cond, \$7.9k nego; '85 Mustang conv, low miles, \$3.5k nego. 332-2229

'90 Chevy Sport PU, stereo/cassette, A/C, pwr windows and locks, 350 V8, trailer wiring and hitch, 54k mi, good cond, \$10k. Jenny, x47583 or 538-2675.

'91 Olds 98 Regency, 60k mi, ex cond, \$11.9k obo. 480-2978.

'90 Honda Prelude SI, blk/blk, sunroof, 5 spd, new brakes, \$8.5k obo. 334-7961.

'85 Mazda RX7, blue, clean, 105k, new allum wheels, viper alarm, radio/cassette, bra exhaust sys, belts, brakes, clutch, radiator, starter, \$5k. 282-6976 or 482-0002.

'91 Honda Civic DX, 4 dr, white, ex cond, 30k mi, \$9.6k. 554-5492.

'88 Mazda 626 LX touring sedan, loaded, sunroof, 5 spd, blue, ex cond, 96k mi, \$5.6k. x37130.

'79 Porsche 911, white/brown, A/C, 100k mi, \$10.9k. Steve, 486-8047.

'66 Chevy PU, LWB, PS, PB, tilt, 350/350, AM/FM/cass, new front fenders, restore project, ext height Leer cover shell, \$2k. Bob, 992-0938.

'86 Buick Century, A/C, 4 drs, good tires, runs good, oil changed every 3k mi, \$1.5k obo. Joe, 461-4898 or 280-9086.

'90 Ford Mustang GT conv, 5.0, auto, loaded, keyless entry w/kill switch, white w/white int, and black top, \$9k obo. x37606 or 484-0919.

'93 Olds Silhouette minivan, ex cond, all pwr, security blocker, loaded, 36k mi, \$13.7k obo. Steve, x40239 or 482-5031.

'87 Honda CRX, good cond, new motor, and AM/FM cassette. Steve, 282-6676 or 992-2841.

'88 Toyota Camry LE, black w/maroon interior, pwr windows/locks, sunroof, cruise/tilt, alarm sys, 96k mi, \$6.3k obo. Julie, x31540 or 485-3939.

'89 Ford Tempo, everything automatic, new tires, good cond, \$1989. Vivian, 992-1414.

'90 LeBaron Prem conv, ex cond, low mi, new tires, CD, leather, \$8.5k. 488-6526.

'92 Pontiac Sunbird SE conv, loaded, 4 cyl, auto, good cond, \$9k nego. x36228 or 409-848-1615.

'89 Dodge Ram Charger, 318 V8, 2WD, loaded clean, runs great, \$5k. Mike, x33838 or 998-7780.

'74 Mercedes, 113k mi, sunroof, ex cond, make offer. 333-1789.

'90 Subaru Legacy, auto, A/C, tilt, cruise, PW, PL, and mirror, 62k mi, \$5.9k. 333-4609.

'90 Honda Accord LX 4 dr, Bordeaux red, ex cond, auto, A/C, pwr locks and windows, cruise, AM/FM/cass, 95k mi, \$8 nego. Maggie, 538-4258.

'91 Dodge Caravan SE, 73k mi, well maintained, pwr locks, cruise, tilt, tinted windows, 7 passenger seating, \$7.5k. 281-343-0584.

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'91 Dodge Caravan SE, 73k mi, well maintained, pwr locks, cruise, tilt, tinted windows, 7 passenger seating, \$7.5k. 281-343-0584.

'83 Chris Craft Sportsman, twin Mercruiser engines, shower, toilet, refriger, low eng hrs, lg open back deck area, \$35k obo. 339-1197.

'75 Mooney M20F, A/C partnership, 2350TT, 480 SMOH, full IFR, DME, dual GS&AP, ADF, \$27.5k. 333-5264.

'90 Chevy Sport PU, stereo/cassette, A/C, pwr windows and locks, 350 V8, trailer wiring and hitch, 54k mi, good cond, \$10k. Jenny, x47583 or 538-2675.

'91 Olds 98 Regency, 60k mi, ex cond, \$11.9k obo. 480-2978.

'90 Honda Prelude SI, blk/blk, sunroof, 5 spd, new brakes, \$8.5k obo. 334-7961.

'85 Mazda RX7, blue, clean, 105k, new allum wheels, viper alarm, radio/cassette, bra exhaust sys, belts, brakes, clutch, radiator, starter, \$5k. 282-6976 or 482-0002.

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Today

Cafeteria menu: Special: tuna noodle casserole. Total Health: broiled chicken breast. Entrees: deviled crabs, broiled pollock, liver and onions, broiled chicken with peach half, Reuben sandwich. Soup: seafood gumbo. Vegetables: Italian green beans, cauliflower au gratin, steamed rice, vegetable sticks.

Monday

CQSDI conference: The American Society for Quality Control will host a two-day conference on Quality in the Space and Defense Industries March 4-5 at the South Shore Harbour Resort and Conference Center. Featured speakers include JSC's Safety, Reliability and Quality Assurance Director Charlie Harlan, SR&QA's Deputy Director Gary Johnson and Daniel Burnham, president of AlliedSignal Aerospace. Contact Glen Van Zandt for registration, mail code AH3, x33069 or contact Larry Shaw for additional information x32173.

Cafeteria menu: Special: Italian cutlet. Total Health: herb flavored steamed pollock. Entrees: barbecue beef spare ribs, steamed pollock, baked chicken. French dip sandwich. Soup: black bean and rice. Vegetables: California mix, okra and tomatoes, vegetable sticks, ranch style beans.

Tuesday

Space science conference: The American Institute of Aeronautics and Astronautics will host a Life Sciences and Space Medicine Conference from March 5-7 at the Sheraton AstroDome Hotel. Professionals from around the world will discuss "From Space Medicine to Business Opportunities," during the three-day conference. Featured Speakers include JSC Director

George Abbey, NASA Administrator Daniel S. Goldin and Biomedical Research Institute Director David Short. For program details, registration forms call 1-800-NEW-AIAA.

ABWA meets: The American Business Womens Association, Clear Lake Area Chapter will meet at 5:30 p.m. March 5 at South Shore Harbor Country Club. For information call Nancy Hutchins at x34006.

Cafeteria menu: Special: spaghetti with meatballs. Total Health: baked potato. Entrees: stir fry beef, liver and onions, beef cannelloni, ham steak French dip sandwich. Soup: split pea. Vegetables: winter blend mix, seasoned cabbage, breaded squash, lima beans.

Wednesday

Toastmasters meet: The Space-land Toastmasters Club will meet at 7 a.m. March 6 at the House of Prayer Lutheran Church. For more information call Jeannette Kirinich x45752.

Astronomy seminar: The JSC Astronomy Seminar will meet at noon March 6 in Bldg. 31, Rm. 129. An open discussion meeting is planned. For more information, call Al Jackson at 333-7679.

Cycle club: The Space City Cycle Club will meet at 5 p.m. March 6 at the Grumman Bldg. at Ellington Field. For more information call Mike Prendergast at x45164.

Cafeteria menu: Special: smoked barbecue link. Total Health: roast pork loin. Entrees: cheese enchiladas, roast pork and dressing, baked chicken, steamed pollock, Reuben sandwich. Soup: seafood gumbo. Vegetables: Italian green beans, Spanish rice, turnip greens, peas and carrots.

Thursday

Warning system test: The site-

wide Employee Warning System will under go its monthly audio test at noon March 7. For more information call Bob Gaffney at x34249.

Cafeteria menu: Special: chicken fried steak. Total Health: roast beef with gravy. Entrees: steamed pollock, lasagna with meat, steamed pollock, catfish, French dip sandwich. Soup: cream of turkey. Vegetables: whole green beans, butter squash, cut corn, black-eyed peas.

Friday

Writers conference: The Bay Area Writers League will host a writing conference at 8 a.m. March 8-9 at University of Houston-Clear Lake Bayou Bldg. The conference will focus on "From the Genres to Technology," addressing such topics as newsletters, grant applications, procedure writing and technical writing for the computer age. Cost is \$95 non-members and includes membership into the Bay Area Writers League. For information, call Susanne Kolodzy 488-1128.

Astronomers meet: The JSC Astronomical Society will meet at 7:30 p.m. March 8 at the Lunar & Planetary Institute 3600 Bay Area Blvd. For more information call Chuck Shaw at x35416.

Cafeteria menu: Special: fried chicken. Total Health: vegetable lasagna. Entrees: pollock hollandaise, beef stroganoff, vegetable lasagna. Vegetables: steamed broccoli, carrots vichy, Italian zucchini, breaded okra.

March 13

MAES meets: The Society of Mexican American Engineers and Scientists will meet at 11:30 a.m. March 13 in the Bldg. 3 Cafeteria executive dining room. For more information call Michael Ruiz at x38169.

\$1285. Don, 333-1751.

Mac LC 7.0 w/color monitor, Stylewriter and lots of software, ex cond, \$850. Kristi, x32446.
Casio color power graphic CFX 9800 GW color graphing calculator, for advanced math, science and engineering, dual graph display, icon driven menu, best offer over \$75. Alison, x30371 or 286-9820.

486 DX2-66, 8MB RAM, 420MB HD, SVGA video, \$650; 386 DX40, 4MB RAM, SVGA video, 170MB HD, \$375. Charles, x36422 or 280-9650.

Mitsubishi 99X cellular phone, cig lighter attachment, 100 number memory, \$50. 480-6797.

Computer tape backup drive, internal, 250 MB, Windows software, 8 tapes, \$125. 480-6797.

NeXT Station Turbo, 17" monitor, Mathematica software, \$2.6k. 991-0821.

Musical Instruments

Marshall 100W full stack, \$850; Fender twin reverb amplifier, \$450; Fender super reverb, four 10" speakers, \$500; speaker cabinet, 20" 12", \$100; tree, \$20; boom mike stand, \$25; Carlos 12 string acoustic guitar; Gibson Melody Maker w/hardshell case; Prairie acoustic guitar; hardshell case for acoustic guitars; B.C. Rich electric guitar w/hardshell case; Marshall 5010, 30W solid state, single 12' speaker. x39080.

Pets & Livestock

Black Lab puppy, male, 8 wks old, "Jake," \$50. Kim or Matt, 338-2090.

AKC black Chow puppies, 3 male, 3 female, born 12/24/95, \$150. Curtis Terry, 471-2038.

Household

Entertainment center cabinet, black, w/glass door, for TV and stereo components; '60s and '70s Rock & Roll records, CDs. x35331 or 488-2656.

Bunk beds, corner unit w/dresser, pine, contemporary B&W comforters, \$150. Melissa, x41928 or 338-6798.

Duncan Phyfe mahogany dining suite, 6 chairs, china cabinet, \$1500. 996-0152.

Large entertainment center, ex cond, holds 32" TV and over 40 CDs, oak finish, \$110. 771-8012.

Two matching high back light brown swivel rockers, eight-way hand tied by Wood Mark for living room, ex cond, \$150 ea. 488-5143.

Portable dryer, \$100; love seat, brown/flower; 20" end tables, \$10; recliner, \$20; stereo cabinet, \$20; tire on rim, \$30; 10 speed bike, \$40. 487-9677.

Matching sofa and love seats, brown beige stripe pattern, \$100 for both; music console w/turntable, tape player/mixer, \$100. Jan, 282-3411 or 280-9086.

Childcraft baby furniture, white, dresser, bed, mattress, changing table, \$500. Dawn, 486-8697.

Dinette, 3x5, 4 chairs, brass w/glass top, \$75. 486-7621.

Black stand for 35" TV, has VCR compartment, \$95 nego. x35590 or 991-0821.

Bedroom set, full size, antique green, dresser, 5 drawers, chest and 2 night stands, Italian design, ex cond. Magdi Yassa, 333-4760 or 486-0788.

Yellow rattan bedroom set, dbl headboard, trpl dresser w/mirror, nightstand, \$300; rattan lounge chair/ottoman w/cushions, glass end table, \$300; coffee table, 2 end tables, \$25. 480-4131.

Early American living room set, couch, love-seat, chair and solid maple coffee table, \$200 for all, obo. 337-4182.

Green recliner, \$75; white sewing machine, never used, \$100. x36080.

Wanted

Wanted used drum set, good cond, reasonable. Mark, x48449.

Want personnel to join VPSI Vanpool departing Meyerland Park and Ride lot at 7:05 a.m. for JSC. Vanpool consists of on-site personnel working 8 a.m./4:30 p.m. shift. Don Pipkins, x35346.

Want personnel to join vnpool departing Surag Land Westwood, via HOV lane, for JSC and offsite locations. Alice, x35234.

Want maternity clothes, sz 4. 996-0152.

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

Want crib and changing table, wood, natural color, ex cond and good price. Yaremi, x48858 or 554-4746.

Want recliner in good working cond. x48862 or 332-0164.

Want housemate to share 3-2.5, 4-story waterfront townhouse near South Shore Harbour area. Amenities include community pool, private hot tun and tanning bed, 2 bars, 2 decks overlooking canal, boat slip, lofted study, enclosed garage, lots of storage space, \$550/mo + 1/2 util. Terry, x39234 or 335-0013.

Want roommate to share League City 3-2-2, \$275/mo + 1/3 util. 334-3529.

Want non-smoking roommate to share 3 BR townhome in Clear Lake area, \$350/mo, bills paid. John, x30543 or 286-7384.

Need non-smoking roommate to share 2-2 apt on the lake, \$300/mo, all bills paid. 335-1280.

Miscellaneous

Fish tank, 48-gal w/undergravel filter and 2 overflow filters w/gravel leaning attachment, salt and fresh water equipment, \$350. 943-7139.

Large guinea pig or rabbit cage, ex cond, \$35; hamster cage, \$15; TV cart, \$20; two drawer walnut end table, \$20. 488-5564.

Little Tykes swing, \$5; Little Tykes booster seat, \$5; Fisher Price nighttime bottle warmer, \$12; Mickey Mouse curtains w/matching pillow sham, \$10; Mr. Coffee automatic coffee maker, \$10; launch pad kids computer operating system, \$15; Scott CD receiver, \$50. x37130.

Men's Tony Lama cowboy boots, sz 7, black,

hardly worn, \$20. 332-2229.

New polished brass door locks, drawer pulls, light fixtures and kitchen cabinet accessories. Don, x38039 or 333-1751.

Franklin Planner, vinyl binder and master filler, \$20. Alison, x30371 or 286-9820.

Lifestyler 8.0 treadmill, like new, zero to 8 mph, 1.24 hp dc motor, \$350. Bob, x33149 or 488-7036.

Art Deco graphic of Miami's Cardoza Hotel, unique custom frame and matting, 29" x 36.5", black/white/silver, \$35. x31370 or 334-7412.

Hammermill 5 hp shredder, accepts 3/4" branches, heavy duty, \$200. 474-2660.

Riding lawnmower, 11 hp, 36" cut, \$400. 479-0276.

Black aluminum long-bed camper top, \$75; '67 Barracuda, needs work, \$300. 554-6813.

Men's black leather coat, full length, sz 42, removable liner, ex cond, \$175 obo. 322-7427.

Complete set of Colliers Encyclopedia w/Home Repair, Auto Repair, Family Medical, and story books, ex cond, no current annuals, \$400. Bob, 992-0938.

Bench table saw, 10", 2 hp, tilt and miter, never used, \$130; saw blade, 10", 40 tooth carbide tips, never used, \$20. x35761 or 480-6

Safety is No Accident

March 1996

Electrical Safety Fair set for April

A publication of NASA's Johnson Space Center for Employees' Safety and Health

Fitness Challenge to kick off today, help fight body fat battle

By Larry Wier

Today kicks off the 1996 Fitness Challenge and many JSC employees can fight the body fat battle by earning the Presidential Sports Award and logging fitness activity.

The Fitness Challenge runs from today until Aug. 31 and promotes physical activity among NASA employees nationwide. Employees who qualify for the award also will be entered into a drawing for a \$100 gift certificate from Oshmans Super Store. Eleven gift certificates will be awarded to participants.

There are more than 60 activities in which employees may sign-up to participate. The most popular activity is the sports/fitness category that requires 50 hours of physical activity during the four-month period. This may include exercise on the stationary bike, weight lifting, aerobics or any other combination an employee would like to try.

The Gilruth fitness staff will complete logs for individuals who use the Gilruth Center. Other employees may complete a log that they obtain from the fitness staff.

The Fitness Challenge follows a recent survey conducted by JSC's Health-Related Fitness staff which revealed that the number of employees at JSC who are overweight has jumped to 26 percent in the past 10 years.

With some 34 percent of all Americans now considered overweight, the health danger of excess body fat has become a public concern. In response to this concern, JSC's Health-Related Fitness staff is offering courses in Nutrition Intervention and Complete Weight Control.

Overweight was defined by a Body Mass Index at or exceeding 27.8 in men and 27.3 in women. The BMI is a ratio of body weight in kilograms and the squared height in meters.

JSC researchers compared the medical examination records of the 1983 workforce with those of the 1993 workforce. The comparison showed

that although there was no age difference between the groups, the mean body weight in 1993 was higher by 5.4 pounds in men and 8.4 pounds in women. The overweight prevalence at JSC was lower than the national average (19.5 percent in 1983 and 26.1 percent in 1993), and it rose at a lower rate (6 percent a year compared to the national 8 percent increase).

A statistical comparison of the employees who were working here for the entire 10 years showed that a 10-year weight gain was independently related (that is despite the connection to other factors, such as age and sex) to higher blood pressure, cholesterol, triglycerides and glucose.

So how does a person maintain a healthy body weight? The emphasis must be on physical activity first and then on healthy eating. The key is exercise. As a rule, people confront the problem of weight control by going on a diet. However, people who go on a diet almost always fail; they do not follow up with exercise, and they do not maintain a healthy weight in the long run.

On the other hand, those who start with an exercise routine and stick with it, invariably adopt healthier eating habits. The most prudent plan is to combine a moderately progressive exercise program with a moderate, nondrastic, reduction in caloric intake.

The Health-Related Fitness Office has three programs addressing weight loss and weight control. The Health-Related Fitness Courses (I, II and III) are structured classes of combined education and individually prescribed exercise programs. The Nutrition Intervention Program is a six-week series of lectures, emphasizing the role of diet in blood chemistry. The Complete Weight Control Program uses a rotating series of instructors with expertise in the four weight control basics: exercise, nutrition, medicine and behavior. These programs have a proven record in weight control and health. For information on health related fitness courses and the 1996 Fitness Challenge, contact the Health-Related Fitness Staff at x30301 or Mail Code AW-9.



JSC Photo by Benny Benavides

A Houston Lighting & Power employee shows the danger of electricity during last year's Electrical Safety Fair.

Electrical safety fair set for April

By Rindy Carmichael

JSC will host its second annual Electrical Safety Fair from 10 a.m.-2 p.m. April 2 in the Teague Auditorium. Co-sponsored by Houston Lighting & Power, the event is designed to educate employees about both residential and work-related electrical safety issues.

"Electricity is our most useful and convenient form of energy," said John McGee, electrical safety standards instructor for the NASA Safety Training Center. "However, to fully appreciate it, we must understand and control the hazards it presents. By taking the time to learn and practice simple electrical safety guidelines, we can protect ourselves and our co-workers. These same guidelines will also protect us at home."

HL&P will sponsor various booths dealing with electrical characteristics. In addition,

classes will be held throughout the day covering a variety of topics such as the power of electricity, hurricane safety tips, energy management and energy and the environment. There also will be demonstrations from the HL&P arc truck. The exhibit was popular at last year's fair and is recommended for those employees who might be exposed to high voltage or work in the vicinity of high voltage.

Other booths will include participants from the Health, Safety and Environmental Compliance Office; Emergency Preparedness; Kelsey-Seybold; Total Health; Johnson Controls World Services; Safety Learning Center and the Center of Excellence in Occupational Safety and Health.

The fair is intended to be fun as well as educational. Drawings will be held throughout the day for electrical safety-related items and a grand drawing will be for a framed astronaut print. All employees are invited. For more information, call x45078.

Second annual safety day plans under way

The 1996 Safety and Total Health Day planning committee is looking for volunteers to help with any of the working groups that are coordinating activities for the event.

"Dividing tasks into manageable pieces that a subgroup of people work completely was felt to be the most efficient course of action," said committee chairman Larry Neu.

The groups will be responsible for advertising; entertainment, refreshments and giveaways; logistics and maps; booth recruitment and overall scripting and scheduling.

"The more people we have now during the planning stage to provide inputs and ideas to improve our program will allow the stand-down day to be productive, enlightening and useful to all employees," Neu said.

Set for Oct. 23, this year's event will combine the Safety Awareness Day with the Total Health Pond Party.

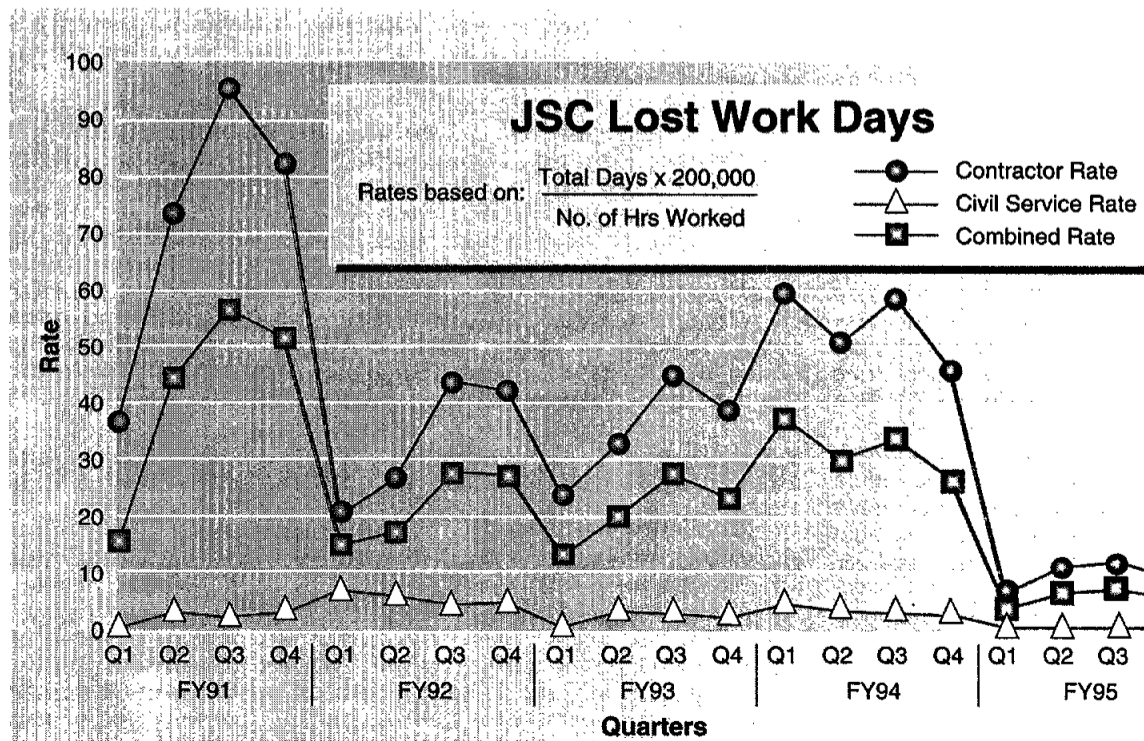
"By combining the best elements of these previous events, the 1996 stand-down day should prove to be enlightening while also enjoyable," Neu added.

The initial plan for the day includes

interactive displays for employee involvement and education, informational booths and briefings, self evaluation of safety plans and health check-ups, and self inspections. The feedback from last year's attendees is being analyzed to develop central themes for 1996.

Many on-site and off-site organizations will be asked to provide and staff a booth that will deal with a particular health or safety issue that can be shared with the rest of their fellow employees. In addition, many companies and outside organizations will be invited to set up booths and display educational items concerning safety and health.

One or two representatives from each group will meet with the planning committee on a periodic basis to brief what their group is doing. Each group can detail progress and make sure the other subgroups are working toward the same general "big picture." All members of groups will meet every six weeks. Any JSC employee wanting to participate in planning activities can contact Neu at x30559 for information on meeting times and locations.



LOST DAYS RATE IMPROVING-Since the beginning of fiscal year 95, the JSC Lost Work Day Severity Rate has improved. The Lost Work Day Severity Rate is the total number of lost work days per 100 employees per year. Lost work days are considered to be the number of full days an employee is away from work due to a mishap. Data is collected by JSC's Health, Safety, and Environmental Compliance Office, then calculated and published monthly. The improvement trend follows the new emphasis in safety by management and employees, which has increased employee awareness and involvement and resulted in fewer lost work days. Employees will soon be able to track the rate on the JSC Safety Home Page at <http://www.jsc.nasa.gov/jsc/safety/>

Students use Hubble to make science observations

Students in grades K-12, working alongside some of America's foremost astronomers, will have a chance this spring to help do real science observations using the Hubble Space Telescope.

The resulting observations will be featured in a live, interactive telecast on NASA Television and public television in March and April.

The observing time was offered for students by astronomers from a lively discussion and debate via the Internet. Students

were challenged to go on-line to research and decide which planet in the solar system would be best to study. Neptune and Pluto were selected as targets by students who will be serving as Hubble Space Telescope "Co-Investigators."

Over the next two months, mission planners will transform the students' selection into detailed plans for the observations. Students will be able to follow

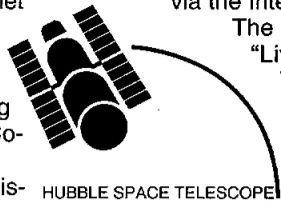
the progress of their upcoming observations via the Internet.

The students then will be featured on "Live from the Hubble Space Telescope: Making Your Observations" airing at noon JSC time, March 14, and on "Live from the Hubble Space Telescope: Announcing Your Results" airing at noon, April 23. "Live from the Hubble Space Telescope" is part of the ongoing Passport To Knowledge series.

The series provides low- or no-cost access to "real science, real scientists, real locations, real-time" by using integrated multimedia components — print, on-line and live video.

Passport To Knowledge is supported by NASA, the Space Telescope Science Institute, the National Science Foundation and public television.

For more information, access the project's home page on the World Wide Web at: <http://quest.arc.nasa.gov/livefrom/hst.html>



HUBBLE SPACE TELESCOPE

Deadline for scholarship approaching

Scholarship applications for both the NASA Exchange-JSC Scholarship Program and the NASA College Scholarship Fund are due by March 29.

The Exchange Council expects to award one scholarship to a student on the basis of academic achievement, financial need and involvement in school or community activities. The scholarship program is open to students currently enrolled and in good academic standing in college, or who will graduate from a public, parochial or private high school this year and who are dependents of eligible JSC employees.

Scholarship support of up to \$4,000 will be provided in the amount of \$400 per semester, \$250 per academic quarter and \$200 per summer session, or as the Exchange Council determines. The amount will not exceed \$1,000 in any one-year period.

High school applicants must furnish a transcript of their grades and a record of their scores on either the Scholastic Aptitude Test or the American College Test with their applications or as soon as the results become available. Test results must be furnished prior to March 29.

College students must furnish the most recent transcript with the application, as well as high school grades and either SAT or ACT scores.

Application forms and the students' scholastic records will be evaluated by the JSC Scholarship Committee. All applicants will be notified by mail of the results by approximately May 15.

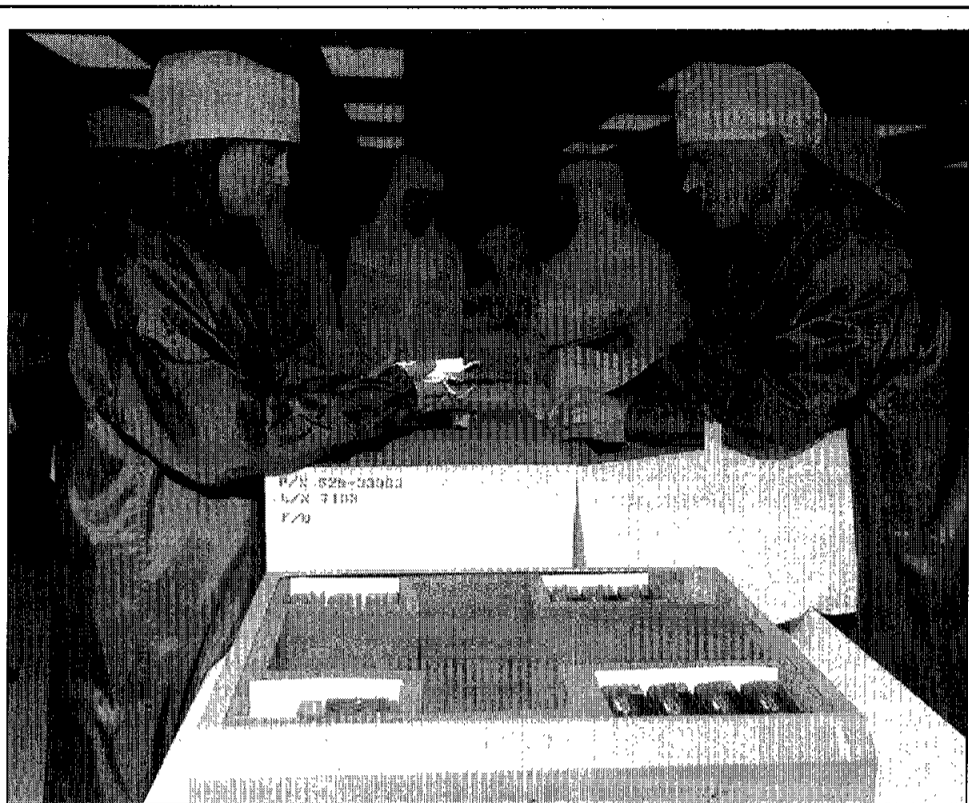
Application forms and agreements for the Exchange Council scholarship are available in Bldg. 1, Rm. 457. Please contact Judy Ernull, x31812, for the forms, or Debra Johnson, x34157, for information. To be considered for this year's program, forms must be returned by March 29, in a sealed envelope to: D.L. Johnson, chairman, JSC Scholarship Committee Mail Code B1.

Separate applications for the NASA College Scholarship Fund also are due by March 29.

This fund will award five scholarships of \$2,000 each. The scholarship is renewable for six years, not to exceed \$8,000. Applicants must be pursuing an undergraduate degree in science or engineering.

Applicants must be dependents of current or retired NASA employees or dependents of former NASA employees who died while employed by NASA. Applicants must be graduated from an accredited public, private, or parochial high school or be currently enrolled in college with good academic standing. An applicant must have a combined high school grade and college grade point average of 2.5 on a 4.0 scale.

After meeting the minimum requirements, applicants will be ranked based on the following objective standards: academic preparation, including grades, class rank, and pattern of courses; school activities; community activities; performance on SAT or ACT; written recommendations from individuals who know applicant; and one-page statement of academic purpose by applicant. Applications are available in Bldg. 1, Rm. 840. Completed applications may be mailed to JSC, the NASA College Scholarship Fund, Inc.; Mail Code AH12/Scholarship Committee; Houston, TX; 77058.



RETURN TO MIR—STS-76 Mission Specialists Linda Godwin and Mike Clifford check out their crew storage for the March 21 docking with the Russian Mir Space Station. Godwin and Clifford will be joined by Commander Kevin Chilton, Pilot Rick Searfoss, Mission Specialist Ron Sega and Mission Specialist/Cosmonaut Researcher Shannon Lucid. The third docking will transfer Lucid for a four and a half month stay on Mir.

JSC photo by Robert Markowitz

No danger to crew during tether break

(Continued from Page 1)

Allen, Pilot Scott Horowitz, Mission Specialists Jeff Hoffman, Claude Nicollier, Franklin Chang-Diaz and Maurizio Cheli and Payload Specialist Umberto Guidoni were never in any danger.

"It has always been our utmost priority to make sure that we could keep ourselves safe," Allen said. "As it turned out, having the tether break inside the boom was probably the best case that could happen as far as having to maneuver *Columbia*. No maneuvering was necessary and we assessed that pretty rapidly."

The tether apparently snapped near the top of the 39-foot boom in *Columbia's* payload bay. The satellite began moving away from the shuttle as a result of orbital forces.

"Once we realized that the tether had broken at the very bottom, we understood that it posed no danger and at that point we tried to photograph it," Hoffman said. "We did see this big jumble of tether moving away and after a few minutes it disappeared into the sunset and that is the last we saw of it."

For the next two days, Mission Control continued to collect data from TSS for science investigations until the batteries lost power.

The TSS deployment had been delayed until Sunday because of a balky data relay system. The Smart Flexible Multiplexer Demultiplexer, or Smart Flex, was experiencing an overload and switched itself to a backup system. The Smart Flex was crucial to sending commands and data to the satellite-related experiments in *Columbia's* cargo bay. The crew spent Saturday morning activating

each experiment individually trying to troubleshoot the problems. Once all experiments were activated, Smart Flex began transmitting data successfully so mission managers decided watch the system for 24 hours before beginning the deployment.

With no problems reported in 24 hours, the crew began to deploy the satellite at 2:45 p.m. Sunday. The crew slowly unreeled the satellite, reporting little oscillation in the tether. When the satellite was nearing the end of deployment the tether broke and slowly moved away from *Columbia* into the darkness of space. The satellite is expected to reenter the Earth's atmosphere in 20 to 30 days.

After the remaining tether was reeled back into *Columbia's* payload bay and the boom retracted, the crew turned its attention to the United States Microgravity Payload. USMP activities were going well mid-week as scientists collected data from a

variety of experiments. Scientists are able to monitor or make changes via computers at Marshall.

Meanwhile, an investigation team has been established to look into the loss of the TSS.

"Given the public investment in the tethered satellite, it is important that we find out what went wrong," said Wil Trafton, acting associate administrator for the Office of Space Flight, Monday. "To do any less would be a disservice to the American and Italian people."

The team will be chaired by Kenneth Szalai, director of the Dryden Flight Research Center, and will give a preliminary report with recommendations to Trafton within 75 days.



More choices available to retirees in Career Plus+ program

(Continued from Page 1)

and gaining office space and electronic connectivity to JSC.

In addition to the "incubator" services, JSC will contract with the retiree for work on the technology project. Retirees will be paid what employees would earn under the "Phased Retirement" or "Partners in Education" retirement options. A significant difference from the other Careers Plus+ options is that participants in "Partners in Technology" are not rehired as reemployed annuitants. This new option lasts for one year with an optional second year if specified commercialization

milestones are met.

To participate, employees must apply by June 30 and disqualify themselves from any further development, test or study on behalf of the government with regard to the identified technology. If the license is granted, the employee should contact the Legal Office for advice on potential conflict of interest issues. The employee must retire by Sept. 30 unless an extension is necessary due to delays in the licensing process.

The expanded "Partners in Education" option helps employees transition to teaching positions in

grades nine through twelve in public schools. Preference will be given to teaching arrangements involving math and science. As with most other Careers Plus+ options, employees voluntarily retire and are hired back as reemployed annuitants working a maximum of 1040 hours for up to two years. These hours are spent taking classes through the Teacher Certification Program at the University of Houston Clear Lake, teaching at a participating school district and supporting JSC's educational outreach program run by the Public Affairs Office.

The pay arrangement is similar

to the Partners in Education College Option. Additionally, JSC will pay for certification training for up to two years. Employees must have a bachelor's degree to participate in this program and must retire by Sept. 3.

Employees interested in the "Partners in Technology" option, should contact the Technology Transfer Office at x30295, or the Human Resources Management Branch at x36251. For more information on the "Partners in Education" option, please call the Human Resources Development Branch at 35266.

JSC takes precautions against dry conditions

Texas, including JSC, is under an extreme fire hazard alert because of the dry conditions and JSC safety officials are taking precautions.

"You may be aware of the large number of grass fires in Texas, we recently had a small one in the field just northwest of Bldg. 44," said Stacey Nakamura, chief of the Safety Health and Environmental Compliance Office. "Due to these dry conditions we are not allowing model rocket launches pending better weather."

JSC has taken these extra precautions due to the Texas Forestry Service alert about the dry conditions throughout Texas. Once conditions improve and the area receives substantial rainfall, the Forestry Service and JSC will suspend their alerts.

"The ground can still be moist but the vegetation could be dry or dead," Nakamura said. "We are asking employees to please be extra careful with flammables, including cigarettes, during these dry conditions."

Nakamura added that employees who drive off-road need to take extra precautions because they could ignite grass fires with their car's catalytic converter. For more information on the fire alert or fire protection, call the Fire Protection Engineer, Gary Jackson at x34090.

Life science three-day conference begins Tuesday

The benefits of medical research conducted in space will come down to Earth during a three-day conference hosted by NASA and the American Institute of Astronautics and Aeronautics set to begin Tuesday in Houston.

JSC Director George Abbey will welcome conference attendees to the Life Science and Space Medicine Conference and Exhibition being held March 5-7 at the Sheraton Astrodomo Hotel.

Civil servants may register to attend the conference by calling Glen Van Zandt at x33069. Others interested in attending the conference may call the AIAA at 1-800-NEW-AIAA for program details and registration forms.

March deadline near for technical papers

The March 15th deadline for papers to be presented at the 21st annual Technical Symposium is rapidly approaching.

The American Institute of Astronautics and Aeronautics is seeking papers to be presented at the 21st annual Technical Symposium to be held May 23 at the Center for Advanced Space Studies.

The theme of this year's symposium is "New Frontiers Through Technologies, Process and Paradigms." Government and contractor employees are encouraged to write a paper, which does not require formal AIAA publication, or demonstrate some new hardware or software product they have developed. The symposium is being hosted by the local section of the AIAA and the Lunar Planetary Institute and will be held at the Center for Advanced Space Studies at 3600 Bay Area Blvd.

Abstracts should be 250 words or less and must be double-spaced. Electronic submission, demonstrations and exhibits of hardware are encouraged. Presentations will be limited to 20 minutes. Vu-graphs or 35mm slides are preferred with handouts available.

Abstracts should be submitted with a NASA Form FF427 and a paper/author information sheet to Charles Teixeira, Mail Code EA63, or email at cteixeir@gp903.jsc.nasa.gov

For more information call Teixeira at x34647.