Lyndon B. Johnson Space Center Houston, Texas



The snow-white desert at White Sands Space Harbor is JSC's shining homecoming spot for the space shuttle. Story on Page 3.

Safe harbor



### Shore leave

Crew members for the M/V Anastasis, an international mercy ship, visit JSC to pick up educational materials. Story on Page 4.

# pace News Roundup

September 22, 1989



With cooling packs running, the STS-34 crew awaits the start of an emergency egress test at Kennedy Space Center's Shuttle Landing Facility during terminal countdown demonstration test activities last week. From left are Pilot Mike McCulley, Mission Specialists Franklin Chang-Diaz, Ellen Baker, Shannon Lucid and Commander Don Williams.

A pound of computer virus prevention

## Users learn to protect, disinfect

By Kelly Humphries

Personal computer security is an issue of growing importance at JSC, and protection from computer "viruses" was one of the main topics at this week's User Workstation Security Exposition.

At the exposition in the Bldg. 12 Product Demonstration Facility, personal computer (PC) users had an opportunity to learn how to recognize and protect themselves from dangers such as viruses, unauthorized access and data tampering.

Exhibitors also displayed products useful for file encryption, data storage,

access control, keystroke auditing and and local area network security at the forum sponsored by the Mission Support Directorate's (MSD) Data Systems Division Processing

Much attention focused on viruses, one of the most insidious computer security problems today. Viruses are small programs designed to infiltrate other computer systems through program sharing or network communication. They attach themselves to application programs and are executed without the user's knowledge as the application is executed.

Sometimes, the viruses are relatively harmless, but at other times they can wreak havoc on the infected computer's data and programs.

Don Simanton, MSD assistant director for Information Resource Management, estimated that in the past few years 2 percent of the personal computers at JSC have been infected by one virus or another. While the Apple Macintosh has been the principal target, IBM-compatibles using the MS-DOS operating system also have been infected. The cost of disinfection activities and impact to

Please see COMPUTER, Page 1

## **Hurricane strike** seems unlikely; Atlantis poised

By James Hartsfield

Kennedy Space Center began battening down the hatches Monday for a potential strike by Hurricane Hugo, but by Thursday predictions for landfall put the

storm well north of Cape Canav-

Even so, Atlantis—poised on launch pad 39B

was to remain prepared to be placed in a "ride-out" configuration should the pad area see strong enough winds. Earlier in the week, Kennedy officials had prepared the shuttle for a roll back to the Vehicle Assembly Building (VAB). But by Thursday, they had concluded that there was no credible scenario that would require the roll back.

Even if a ride-out configuration is required, an Oct. 12 launch date may remain firm. At the beginning of preparations for Hugo, KSC workers had five spare days in the processing time schedule for launch of STS-34. Those days should keep the slowdown caused by storm preparations from having any effect on the projected launch date.

The forecast Wednesday was for KSC to experience minimal effects from Hugo, with the storm center passing more than 200 miles to the east. Despite the storm problems, servicing and testing of the cooling system for Galileo's radioisotope thermoelectric generators was completed Monday. Checks also were completed on Atlantis' forward and aft reaction control system regulators.

Work began Wednesday on the

frequency response test of Atlantis' main engines.

To shorten the amount of time required to roll Atlantis back to the VAB, the payload bay doors were

closed early in the week, launch pad platforms were retracted and loose items were secured. To make room for

the STS-34 stack in the VAB, the left aft segment of the solid rocket boosters targeted for STS-32 was taken off of its mobile launcher platform. The mobile launcher platform was then moved outside of the VAB until Hugo had passed.

Shuttle managers said it is too early to tell what effect, if any, the lost work on STS-32's boosters may have on that mission's projected Dec. 18 launch date.

A crawler transporter was left at the gates to Pad 39B to be ready in case a decision was made to roll back. These preparations put KSC in a position to have the STS-34 stack secured inside within 24 hours after a decision.

Shuttle managers planned to keep the stack in this configuration and review the situation every six hours until any potential danger from Hugo had passed.

Shuttle hurricane criteria calls for a vehicle on the launch pad to be moved back to the VAB if sustained winds are forecast to be above 64 knots. However, Wednesday's forecast for the Cape predicted Hugo's maximum effects there to be wind gusts to 25

### save JSC \$100,000 Recycling pilot program may

By Linda Copley

JSC should realize between \$60,000 and \$100,000 credit annually on its custodial contract by the implementation of a paper recycling program, according to Ron Williams, chairman of the recycling committee.

If successful, the program will be extended after Jan. 1 to include more

participating in the paper recycling program by fall of 1990," said Williams.

Beginning Oct. 2, separate receptacles for recyclable paper will be located at each desk and in each copier room in Bldgs. 45 and 227, the two "test" buildings. Custodians will collect the paper located in these bins daily.

Specially marked, watertight

buildings to collect the recyclable waste. Acceptable paper will include white writing, typing, and photocopied paper, tabulating and index cards, computer printout paper (white and green bars acceptable), and the Roundup-with or without staples. Acceptable paper types will be listed on the side of the dumpsters.

Unacceptable paper will include "Our goal is to have the entire center dumpsters will be outside these envelopes, carbon and blueprint tree, will appear in the two designated

paper, film, photographs, tape or glue, metal objects such as spiral binders or fasteners, newspapers, magazines, books or cardboard, file folders, cups, lunch bags, wax paper or smoking materials.

'It is important that only the paper listed on the side is inserted," Williams stressed. Posters, bearing the program's insignia of a child hugging a

buildings to remind employees about the program.

Regular trash pickup in the affected buildings will be curtailed to an asneeded basis, due to the high proportion of daily trash that should be deposited in the recyclabe bins. There will be daily pickup of "wet garbage," including food items, from the trash

Please see RECYCLING, Page 4

## Hispanics celebrate heritage this month

Military leaders, heroes to be honored in JSC program

The achievements of Hispanic military leaders and heroes will be honored during this year's Hispanic Heritage Month at JSC.

This year's activities will center around a new Hispanic Heritage Luncheon at 11:30 a.m. Tuesday in the Gilruth Recreation Center. They will culminate with a keynote address by retired Maj. Gen. Dionel E. Aviles, now the head of Aviles Engineering Corp., and remarks by Congressional Medal of Honor recipient retired Army Master Sgt. Roy P. Benavidez.

Rosie Hernandez, chairwoman of the sponsoring JSC Hispanic Advisory Committee, said she hopes the changes to this year's program will enable more people to attend. Last year's program occurred one day before Hurricane Gilbert was expected to strike.

"These are role models for children of all ages growing up in a world of advanced technology," Hernandez said. People of Hispanic descent also are making important contributions to America's space program, she said.

"For the first time, we've got two Hispanic astronauts," she added. "We've got more Hispanics joining the workforce and they are all making outstanding contributions to NASA and to JSC.'

In kicking off Hispanic Heritage Month, Sept. 15-Oct. 15, the luncheon will foreshadow the Hispanic Engineer National Achievement Awards Conference in downtown Houston Oct. 12-

Academy Award nominee Edward James Olmos, star of the movie "Stand and Deliver" and television's "Miami Vice," will be master of ceremonies for

the conference at the Hyatt Regency. The conference is cosponsored by JSC, Xerox Corp., and AT&T Bell Laboratories.

Seven JSC employees are in the running for awards: Nitza Cintron, Ph.D., Elena Huffstetler and Frank Moreno for professional achievement; Rafael Garcia, Franklin Chang-Diaz and Ed Bach for outstanding technical contribution; and Meri Sanchez for most promising engineer.

Recruiter seminars will dominate the Oct. 13 program, and professional and student seminars will be featured Oct. 14. The awards banquet will begin at 7 p.m. Oct. 14 in the Hyatt's Imperial Ballroom.

For more information about JSC Hispanic Heritage Month or the awards banquet, call Lupita Armendariz, x30604.



CONCRETE PROGRESS—The pouring of the foundation for the Bldg. 28 Auxiliary Chiller Facility is under way and work proceeds on schedule for completion by July 1990. Harrop Construction is building the 8,400-square-foot facility, which will provide 4,000 additional tons of chilled water to the 14,000 tons currently available to cool JSC.

## **Ticket Window**

The following discount tickets are available for purchase in the Bldg. 11 Exchange Gift Store from 10 a.m. to 2 p.m. weekdays.

General Cinema (valid for one year): \$3.50 each.

AMC Theater (valid until May 1990): \$3 each.

Sea-Arama Marineworld, Galveston (valid until Oct. 17, 1990): adults, \$8.15; children \$5.10.

Sea World (San Antonio, year long): adults, \$17.25; children \$14.75; 55 Plus Mum Festival (Oct. 4): \$10 with free coupon.

Palm Beach at Moody Gardens (valid through Sept. 1989): adults \$2.75;

Texas Renaissance Festival (open every weekend from September 30 through November 12): adults, \$8.95; children \$4.95.

Texas Renaissance Festival bus trips (Oct. 14 and Nov. 4), departs JSC at 8 a.m. and returns 5:30 p.m.: under age 5, \$6; ages 5-11, \$9; adults \$12.

Radio Music Theater (Thursdays, 8:30 p.m. or Saturdays, 10:50 p.m. through September): free comedy for NASA employees. Call 522-7722 for reservations.

## Gilruth Center News

Sign up policy—All classes and athletic activities are first come, first served. To enroll, you must sign up in person at the Gilruth Recreation Center. Everyone will be required to show a badge or EAA membership card. Payment must be made in full at the time of registration. Classes tend to fill up four weeks in advance. For more information, call the Rec Center at x30304.

EAA badges-Dependents and spouses may apply for a photo I.D. 6:30-9:30 p.m. Monday-Friday.

Defensive driving-Course is offered from 8 a.m.-5 p.m. Oct. 14 and Nov.

Taekwondo/Hapkido-Learn the Korean art of self-defense, mental and physical discipline. Classes held on Tuesdays and Wednesdays, cost is \$40 a

Weight safety-Required for use of the Rec Center weight room. Classes will be 8-9:30 p.m. Oct. 4 and Oct. 25; cost is \$4.

Aerobics and exercise—Both classes are ongoing: cost is \$24.

Ballroom dance-Professional instruction in beginning, intermediate and advanced ballroom dancing. Classes begin Oct. 5 and meet every Thursday for eight weeks. Cost is \$60 per couple.

Fall intercenter run—The 10K and or 2-miles races for the Intercenter Run will be held throughout October. Runners may submit times at Rec Center during

Winter softball—Sign-ups for winter softball will be Oct. 10-11 for NASA teams and Oct. 13 for non-badged teams. Season starts Oct. 17.

Flag football—Sign-ups for flag football will be Oct. 12-13. Season starts mid-

## Dates & Data

Today

Cafeteria menu-Special: barbecue link. Entrees: deviled crabs, broiled codfish, liver and onions. Soup: seafood gumbo. Vegetables: buttered corn, green beans, new potatoes.

Monday

Flu shots-Flu shots will be available daily at the JSC Clinic from 10 a.m.-noon and 2-4 p.m. beginning Sept. 25. Vaccines will be asked to sign a consent form. For more information, call x34111.

Cafeteria menu-Special: chili and macaroni. Entrees: barbecue sliced beef, parmesan steak, spare rib with kraut. Soup: French onion. Vegetables: ranch beans, English peas, mustard greens.

Tuesday

Countermeasure workshop-JSC's Exercise Countermeasure Project will host a workshop on Countering Space Adaptation with Exercise: Current Issues" from 8 a.m.-5 p.m. Sept. 26-28 at the Nassau Bay Hilton. The workshop will include a luncheon with Astronaut Sonny Carter, working groups on cardiovascular physiology, muscle physiology and bone metabolism and an overview of JSC's Exercise Countermeasure Facility. Registration is \$20; lunch is \$15. For more information, call Gus Mazzocca or Linda Barrows, x37104 or x36212.

Hispanic Heritage Week-This year's Hispanic Heritage Week, sponsored by JSC's Hispanic Advisory Committee, will honor the contribution of Hispanics to the nation's military services. A luncheon at 11:30 a.m. Sept. 26 at the Gilruth Recreation Center will feature retired

Maj. Gen. Dionel E. Aviles, head of CINCOM Corp., will address the Aviles Engineering Corp., as keynote speaker. Cost of the luncheon is \$6. For reservations or more information, call Lupita Armendariz, x30604.

BAPCO to meet—The Bay Area PC Organization (BAPCO) will meet at 7:30 p.m. Sept. 26 at League City Bank & Trust. For more information. call Earl Rubenstein, x34808 or 326-2354, or Ron Waldbillig, 337-5074.

Cafeteria menu-Special: corned beef hash. Entrees: meatballs and spaghetti, liver and onions, baked ham with sauce. Soup: split pea. Vegetables: buttered cabbage, cream style corn, whipped potatoes.

Wednesday

Simulation conference—The Southwestern Simulation Conference, sponsored by the Society for Computer Simulation Southwestern Regional Council, will be held Sept. 27-28 at the Gilruth Recreation Center. Presentations are planned on topics ranging from parallel processing to artificial intelligence. A videoconference on neural networks will precede the conference at 11 a.m. Sept. 27. The conference begins at 2:30 p.m. Sept. 27, and will continue from 9 a.m.-4 p.m. Sept. 28. A tutorial on neural networks will be available from 8:30 a.m.-4 p.m. Sept. 29. Basic registration is \$20. For details, call Wade Webster, 283-5087

Cafeteria menu-Special: barbecue link. Entrees: cheese enchiladas, roast pork and dressing. Soup: seafood gumbo. Vegetables: pinto beans, Spanish rice, turnip greens.

Thursday

AIAA dinner meeting-T.E. Airhart, Jr., founder and president of monthly dinner meeting of the American Institute of Aeronautics and Astronautics (AIAA) on "Improving Knowledge and Worker Productivity Through the Use of Personal Computers." The meeting will begin at 5:30 p.m. Sept. 28, at the Gilruth. Dinner reservations are \$7.50 for AIAA members, \$8.50 for nonmembers, and should be made by Sept. 25, by contacting Ava Lunsford, 283-7312.

Cafeteria menu-Special: chicken fried steak. Entrees: roast beef with dressing, fried perch, chopped sirloin. Soup: beef and barley. Vegetables: whipped potatoes, peas and carrots, buttered squash.

Sept. 29

Cafeteria menu-Special: fried chicken. Entrees: fried shrimp, baked fish, beef stroganoff. Soup: seafood gumbo. Vegetables: okra and tomatoes, buttered broccoli, carrots in cream sauce.

Oct. 31

Quality, productivity conference-The sixth annual NASA/ Contractors Conference on Quality and Productivity will be Oct. 31-Nov. 1 at the Von Braun Civic Center in Huntsville, Ala. This year's theme is "Partnership for Continuous Improvement." NASA Administrator Richard Truly is to announce the 1988/89 NASA Excellence Award for Quality and Productivity. To receive an invitation, contact the NASA Quality and Productivity Improvement Programs Office at 202-453-2912 by Aug. 28.

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. Send ads to Roundup Swap Shop, Code AP3, or deliver them to the deposit box outside Rm. 147 in Bldg. 2.

**Property** 

<u>JSC</u>

Sale: 60 acres, 3 mi. from Karnes City on Hwy. 80, 50 mi. from S.A.; El Campo, 2-story house on 1.5 lots, fruit trees, 783-9164.

Rent: Lake Livingston, waterfront house, 3-2, CA/H, furnished, covered deck, wknd. or wk. rates. 482-1582.

Sale: Seabrook, 3.29 acres w/sm. home, 2-

1, secluded, \$95K, owner fin. 532-4784. Sale/Lease: 1/2 mi. west of Hwy. 146 on FM 517, 10 acres, barn, ponds, util. Trey, 280-4381 or 484-7834

CLC Middlebrook, 3-2-2, fenced, FPL, window furnishings, assum. 7.65 FHA loan. 486-6544. Lease: Sycamore Valley/Ellington AFB, 3-2-2, FPL, formal dining, isn. util. room, fenced, \$625/

Lease: Kirkwood So., 4-2-2D, sep. dining, panelled den, gas util., fenced, \$525. 482-6609.

Sale: New Heritage Park, model home cond., \$70K, 996-1990.
Rent: Lake Travis cabin, priv. boat dock, cen.

A/H, fully equipped, accom. 8, wkly./daily, \$325/ \$75, 326-5652 Lease: Univ. Trace condo, \$450/mo., avail. Oct. 1, 2-2, FPL, W/D connec., no pets. 528-

Sale: Pearland, Ig. dry city lot, 4-2.5-2, 2-story home, 9% assum. FHA loan, sprinkler sys. 997-

Sale: NE Dallas, TX, 2,100 sq. ft. townhouse, 3-3-2CCP, LR w/WBFP, formal DR, airy MBR, has WBFP, balcony, \$94,500, FHA assum. w/

qual., will hold 2nd w/10% down. 280-9488. Sale: Timeshare, sleeps 2, Texas Hill Country (Canyon Lake, TX), 10/28-11/4/89, \$210. 280-

Lease: CL, 2 BR apt, W/D, \$395/mo. Dave, 483-8156 or Herb, 483-8161.

Sale: Kirkwood So., 2-story, 2,400 sq. ft., 4-2.5-2, formals, FPL, study, \$79,900. 488-5210. Sale: Seabrook, 3-2-2, many upgrades,

approx. 1,800 sq. ft., all brick, lg. den w/FPL, never flooded, redwood deck w/spa, access, from den and MBR, assume at 9 7/8%, must qual., \$40 down/\$0 closing, \$69,900. Richard, x30271 or 474-9334.

Sale: Heritage Park, 3-2-2, spa, lg. deck, FPL, 10.5% assum., \$69,500. x36617 or 996-0289. Trade: Custom, 4-3 off 360 West of Austin, want similar house near JSC. 471-8795 or 333-

Sale: Kemah, 111' x 180' lot, ready for home building, some trees, \$7,300. 334-1883.

Sale: League City country home, 3-2, gar./CP comb., A/C, deep well on 1.33 acres, \$85K. 334-

### Cars & Trucks

'80 Triumph TR7 convert., 5-spd. Anniv. Ed., new Perelli tires, brakes, paint, \$3,500. Steve, x34176 or 486-8424.

'76 Celica GT, new motor, trans., rear end, front susp., and brakes, mags, needs paint and int., \$1,800. 282-6881

'85 Cherokee jeep, 4WD w/off-road heavy duty susp. pkg. and Chief pkg., AM/FM/cass. Greg,

'87 Shelby Dodge CSX, intercooled turbo, Monroe Formula GP struts, bra, cover, 7/70 warr., 17K mi., \$9,450. 428-6498 or 332-6832. '82 Ford Fairmont, 4-dr. sedan, 2.3L eng., auto.,

A/C, AM/FM, 70K mi., serv. mnls., \$2,400. Dave,

'84 CJ-7, 6-cyl., 5-spd., PWR steering, hard doors, new eng./clutch, needs new top and seat, compl. maint. records, 56K mi., \$5,900. Dave, x37176 or 554-2487.

'88 Honda Accord, 4-dr., 5-spd., sunroof, loaded, 9K mi. Robin, 335-1398. '88 Mustang LX, 2.3L, 43K mi., \$7,400, OBO.

'83 Mercury Lynx L station wagon, good cond.,

\$1,950. Hal, 480-8190 or 337-2033. '84 Chevy Celebrity, 4-dr., auto., A/C, PW, P/ cruise, tilt, AM/FM/cass., \$4,500. Edward, x36250 or 481-4888.

'84 Olds Cutlass Sierra, 4-dr., auto., A/C, P/ S, P/B, \$2,600. 554-4763. '84 Mazda RX-7, charcoal gray, 5-spd., sunroof, A/C, cruise, \$5,400. 337-5990 or 333-

79 4x4 Chevy Blazer, A/C, auto., cruise, tilt, AM/FM, PW, running boards, 107K mi., \$2,395.

483-8456 or (409) 935-4198. '85 Corvette, 2-tone bronze leather, auto., Z-51, bose, wood dash/console, 28K mi., \$16,500. 334-1766 or 483-1064.

'82 Honda Accord, 4-dr., auto., cruise, stereo cass., \$3,850. 483-0092 or 481-3637.

'87 Merkur XR4T, 26K mi., leather int., sunroof. nted windows, cruise, bra, warr., \$12K, 480-4101 or 333-1646

'84 Chrysler La Baron convert, "Mark Cross white, leather int., stereo/cass., A/C, A/T, P/S, P/B, P/W, P/L, 69K mi., \$5,300. x31172 or 332-2089.

'86 T-Bird turbo coupe, red ext. w/red leather int, loaded, ave. B.B. loan value (i.e., JSCCU provides 100% fin. to qual. buyer), OBO. Jeff, 280-7720 or 486-5422.

'77 98 Olds, 403 4 BBL, 80K mi., \$850. Mike or Alma, 532-1812. '76 Pontiac Grand Prix, 2-dr., auto., \$500 cash,

OBO. x30911 or 488-4110. '88 Chevrolet Silverado Dooley 1 ton PU, ext. cab, 12K mi., loaded, 454 cu. in., 4:10 rear end,

running boards, \$15,500. 451-2258.

'73 Plymouth Fury, 2 new front tires, \$300, OBO. x35129 or 480-1330.

'74 Volvo, 4-dr., good tires, new batt., \$500.

### **Boats & Planes**

'78 Renken 19' bowrider, 170hp, fresh wtr. cooled Mercruiser I/O, galv. EZ loader trir., depth finder, \$4K. 532-3515. 18.5' Larson power boat, 90hp Evinrude

outboard, Sportsman galv. trlr., \$2K. 474-2200. 14' laser sailboat w/galv. trir., ex. racing sailboat, laser books and documen, incl., \$800.

486-8185.

MacGregor 25' sailboat, 568-8768. 16' day sailer and trlr., no sail, \$250. 333-6594

86 Honda Rebel motorcycle, 250cc, 6K mi., new batt, runs, needs maint work, \$700; cycle

or 333-3725.

trir., \$400. x35044 or 541-1918 or 333-4473. Men's 23" 12-spd., Centurion Accord RS, racing/leisure bike, less than 15 mi., \$250. Paul, 282-2639 or 480-6147.

Raleigh Wyoming 27" bicycle w/moving racer rims, Shimino 105 pedals and Diacompe brakes, front and rear Jim Blackburn saddle bag racks, cassette freewheel and Halogen light kit, \$250. 483-0291.

### **Audiovisuals & Computers**

20 MB hard disk drive, ST 225 (Segate), \$175; EGA video card, ATI EGA wonder, \$125. Mitch, 335-6168 or 538-3150.

Tandy 1000 PC w/RGB color monitor, \$350: leath Zenith PC w/mono monitor, \$150; V-20 chip, \$5; Quadram inkjet color printer, \$250; floppy drive, \$30; U.S. Robotics 2400 modem, \$250; math coprocessor, \$50; 10 meg hard drive w/control card, \$150; serial card, \$15; memory expansion card w/512K RAM, \$150; parallel card, \$15. 282-3261.

IBM XT (not clone) 640K, parallel, serial, Taxan 600 series hi-res color monitor, 30 meg Seagate drive, floppies, printer, software, \$1,450. 483-0092 or 481-3637.

### Household

OBO. 554-4798.

4-pc. solid oak BR wall unit w/high chest, \$1,500; loveseat, \$40; 2 chairs, \$20/ea.; lg. brn. sofa, \$30; dk. bm. solid wood coffee table, \$20; lt. brn. wooden chair, \$15. x30789 or 280-7794. Full size bed, frame/boxspring/firm matt., 2

sets of sheets, pillows, comforter, \$195. 483-Lg. sectional sofa w/hide-a-bed, tan, \$225,

Waterbed, bookcase hdbd. w/mirror, 6-drawer pedestal, full floatation matt., heater and

thermostat, \$125. John, x36314 or 996-9147. 26" Sony Trinitron T.V. console, modern, dk. wood cab., Matrix sound, remote, cable-ready, \$450, Elvse, 483-7764.

8 restaurant chairs, chrome/yellow vinyl, \$75. 337-3406. Queen size waterbed w/liner, heater, base,

\$150. Barry, 335-1668. BR dresser, Spanish style, lg. mirror, \$30. x38889 or 480-1340. Couch, Early Amer., brn. tone, \$100. Ed,

x36250. 2 "Bedsit" foam chair cushions, brick red. locking tops, coord. throw pillows, \$55/pr. 280-9488.

G.E. hand mixer, \$5; Rival elec. can opener, \$5; foldable wine rack, \$5; Victorian pic. frame, pic. sz. approx. 22.25" x 28.25", \$50; Early Amer reprod. mirror and sconce, \$45; Santa Fe DR set, table w/extra leaf, 4 side and 2 arm chairs, 6' credenza needs some work, \$350, 280-9488. 17 cu. ft. refrig., gold, Frigidaire, top freezer, \$150. 532-1728.

G.E. 40" white free standing range, 2 ovens, rotisserie, grill, used 3 yrs., \$100. Joyce, x36064. Kirsch curtain rods, from Sears, various lengths. Bauch, 333-3382.

Steelcase metal desk, \$35. Mary, 484-6630. Dk. oak dinette table w/2 chairs (uphol. seats), \$50; brn. vinyl recliner, worn, \$15; chrome high hair w/padded back and seat, adj. footrest, barely used, \$20, potty trainer, \$3. x35129.

Brass Aztec calendar for FPL decor., \$55. 486-Tall table lamp, \$25; DR table w/4 chairs, \$175;

French antique bench, \$150; antique tall Grandfather's clock, Westminister chimes, \$250.

Formal sofa, coffee, 2 chairs, 2 end commode style, 2x3 mirror, \$500 for all or priced indiv. 334-

### **Pets & Livestock**

Free, 5 tan/white male puppies, 4 mos. old, Mom reg. Amer. Eskimo, one fem. blk. "mutt", part spaniel. Vicki, x34231.

Free, 8 mos. old blk male lab w/brn. markings, has most shots, 554-2804.

### Wanted

Want non-smoking driver to JSC from Hobby Airport area, hours pref. 7:30 a.m.-4 p.m. or 8 a.m.-4:30 p.m. x36655.

Want car pool, Jersey Village area to JSC. Ed, x33617 or 896-6347. Want clean 2/2 condo for purchase, notes around \$475-\$550/mo., prefer assump., will

onsider lease w/option to buy. 282 9018. Want wrought iron patio set. x36796.

Want child's playhouse, wood or tough plastic

### in good cond., little tyke's toys and Fisher Price toys in good cond.; boy's clothes, 4T and up, Oshkosh, Levis, Bugle Boy, etc. Mary, 484-6630.

**Musical Instruments** Kimball Swinger-700 organ, good cond., \$400, OBO. 486-4156.

Arbor elec. guitar w/Gorilla amp, new, \$250. (409) 925-2172. Korg elec. piano/organ, stand, Peavey keyboard, amp, like new, pd. \$1,500, now, \$795, will

fin. Ed. x33617 or 896-6347. King cornet, ex. cond. w/case, used only 1 yr., \$300. 486-0725.

### Miscellaneous

Beer kegerator (home unit), works perf., holds 16 gal., \$300, Madeline, 480-2817 or 482-0554 Riding lawnmower, 30" cut, dbl.-bladed. 8hp, elec. start, 3 fwd spds. w/rev., \$450, OBO; surfboard, 59" Hurricane, 4 colors, trac-top, trifin, like new, \$300, OBO. Richard, x30271 or 474-9334.

New Wimbledon 98 graphite widebody tennis racket, was \$167, now \$98. Roberto, x30778 or 481-6942. Realistic 200 channel program. scanner, 1 yr.

old, like new, \$250. 488-0597.

White wedding gown by Alfred Angelo w/natching veil, \$450; 2 slips, \$25/ea. 488-6315. New windows, doors and light fixtures priced cheap. Don. x38039 or 333-3313.

Ford 9N tractor, rebuilt eng., needs tires and rad. and restoration, \$500; tractor trir., 16' lowboy, dual axle, new treated bed, \$600, both for \$1,000, delivered. Wally, x36440 or 326-2664.

20' dog leash, coated cable, retract., attaches to wood frame, German made, new half price door, \$32. Greg, 282-4263 or 488-2082. 12-spd. men's bicycle; 2 beer barrel chairs;

Hoover vacuum cleaner; rec. player w/adjust. spd.; cass. rec.; child carrier for bicycle; Spenco bicycle seat cover; baby gate; back chair. Carole, x31698 or 480-2467. Motorcycle carrier for car, \$15; child carrier

for bicycle, \$10; exercycle, \$50. Rob, x33499 or 280-0157. Fiberglass camper shell, fits full size short, wide box PU, \$100. 480-3909.

6 gal. wire mesh for reinforcing concrete, 250 plus sq. ft., \$25. Rick, 280-1500, x3323 or 996-

'87 25' Aries travel trir., self contained, A/C and heat, tow bar, sway bar and elec. brakes, cable ready, sleeps 6, ex. cond. (409) 948-2689. 3 pc. LR set, good cond., \$250; RCA 25" color console TV (no remote), good cond., \$225, OBO; 2-drawer metal file cabinet, blk. w/woodgrain, w/ desk top attach., \$25; Sony sports water resis. Walkman AM/FM cass., \$45. Jana, x31653 or

326-4030. Queen size waterbed w/new matt., heater, \$75; men's 12-spd. touring bike, 1 yr. old, \$75, OBO: '79 Datsun 210, 100K mi., work car, \$200, OBO. David, 488-4207.

Exer. bicycle machine, Sears FXC 5000, ex. cond., \$35. 474-2200.

Rowing machine, West Bend 5100, ex. cond. \$35. 474-2200. Hatch door w/o glass for Honda Civic hatchback 86, \$75, OBO. Noli, 280-1500, x3634

or 486-7527. Wedding dress, white satin and lace, sweetheart neckline, med. length, scalloped train, sz. 9, w/slip and headpiece, was \$950, now \$400. Robert, 282-3098 or 996-7622.

Used gas barbeque grill/ new burner, \$35. Richard 333-7074

3 motorcycle Sunco trir., Ig. tool box att., ex. cond., \$395. 333-6594 or 333-3725. Batman record, 1966, from T.V. series, 33 1/

3 LP, BO. 280-9488. Ping pong table, 6 mos. old, compl., \$75. 333-6179 or 326-3364. Engmt. set, 1/2 carat marquise w/24 ct. gold

very exquisite and unusual set, \$1,200, OBO Mark 484-0862 European antiques, armoires for TV's, sideboards, draw leave tables, chairs, curio cabs., washstand, occas. tables. 955-5669 or 488-

'88 wilderness trir., 5th wheel, Cimarron, 32'5" front LR, microwave, stereo sys., 2-dr. refrig., A/C, queen size bed, elec. jacks, rear bike carrier, awning, used 6 times, \$15,000. Diane, 451-2258

or 674-1569. Sz. 4 women's half-slip petticoat for wedding dress, BO. x36796.

Singer portable sewing machine, \$65; old Eng Smyth and Townley dart board/cab. w/darts, \$22; pair shields w/heads, \$20 both; 2 blackboards 2' x 8', \$10 both. 488-5564.

Antiques: Wheelchair, 2 seed sowers; sewing machine; iron bed; walking plow; 1847 Wm. Rogers Silverplate set of 56 pcs., plus 7 ex. pcs.; G.E. upright freezer; wheelbarrow. 783-9164.

# SPACE HARBOR

# **ONE MAN'S DREAM BECOMES REALITY**

### By James Hartsfield

They say desire and determination, if they come from the heart, can move mountains, and White Sands Test Facility's (WSTF's) Al Paczynski is living proof—the strength of his dreams turned a lonely, snow-white desert into a shining homecoming spot for those who leave Earth.

White Sands Space Harbor is as much a part of Paczynski as it is a piece of New Mexico or a standard of the space shuttle program. In the mid-1970s, standing on a short, lumpy makeshift runway on the fringe of the White Sands National Monument, he somehow envisioned a shuttle landing there. On March 30, 1982, he watched it come true with his heart in his throat. No matter who you are or where you're from, you can't listen to him tell it without feeling a streak of pride in it all.

"That landing was the fulfillment of everything I could have ever wanted," he said. "They were actually going to use the place ... for what I wanted to use it for. After the deorbit burn, I knew it couldn't go anywhere else. I finally knew for sure it was going to happen. It had to

Surrounded then by more than 900 journalists from around the globe, by 1,000 VIPs, and watching the world focus on two seven-mile long, gypsum runways, Paczynski was a far cry from that foregone barren desert. Northrup Strip, located on the Army's White Sands Missile Range (WSMR), originally was built by Northrop Aviation Corp. as a landing area for target drones. Called Northrop Strip at first, the name changed due to a typographical error in a widely circulated early press release.

Paczynski, a NASA employee for 25 years, was working with propulsion and radar testing at WSTF in 1976. He was aquainted with the 10,000-foot long Northrup Strip through several brief operations NASA had conducted there, among them tests of electronic landing aids and balloon releases.

"I heard that several pilots were looking for a place to fly the Shuttle Training Aircraft (STA)," he said, "so I contacted them to see if we could get some additional part of the shuttle program here, in New Mexico. It seemed like a good place to do STA activities because they could fly every day of the year. I really had a shuttle landing site as an ulterior motive; Northrup could be expanded."

NASA saw the benefits of conducting STA training at Northrup: the protected air space and eager cooperation of the missile range; the excellent climate; and the close proximity of WSTF and Holloman Air Force Base. Holloman personnel provide a professional crash and rescue team for the airfield, among a host of other cooperative tasks.

"It just seemed like a natural," Paczynski said. The decision was made quickly, and the original Northrup Strip was smoothed, widened and lengthened to 15,000 feet by

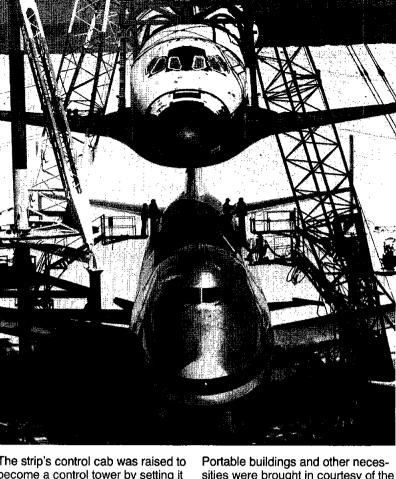
May 1976. The first STA flew there three months later, with astronauts training for the shuttle's Approach and Landing Tests.

'We started out on a real shoestring. It was very primitive,' Paczynski said. "We had no control tower; we used an old control cab from an Apollo Lunar Landing Training Vehicle project set on the ground. We borrowed a UHF radio and other communications equipment from the Army. We bought windsocks, and the range installed some phones. We added a portapotti and we were in business.'

In 1978, a second runway was constructed, intersecting the original runway to reduce crosswind problems. Shortly afterward, Northrup was designated as an alternate shuttle landing site, to be used if the lakebed at Edwards Air Force Base in California was wet. Both runways were lengthened to 35,000 feet in 1979 following that decision.

The nicest thing about operating at Northrup Strip is that it's so easy to build runways," Paczynski said. The area's terrain is simply flat, hard-packed gypsum, and runways basically require only smoothing and marking to be complete, he added.

A towway from the runways to a cement pad outfitted with a 75-ton crane also was built to allow for mating an orbiter to a 747 carrier.



The strip's control cab was raised to become a control tower by setting it atop a scrap Apollo propulsion test stand from WSTF, and Northrup was ready to support STS-1.

Both STS-1 and STS-2 almost launched at times when Edwards' lakebed was wet, but launch slips delayed each and the California runways dried sufficiently.



"It looked like we were never going to get one," Paczynski said. But, five days before the launch of STS-3, a decision was made to land in New Mexico at the end of that mission due to wet conditions at Edwards.

"They couldn't predict when it would dry," Paczynski explained. Preparations began quickly at Northrup for the landing. The convoy equipment from Edwards was shipped to New Mexico by train.

sities were brought in courtesy of the Air Force.

"In every part of the airfield you had a massive effort going on to construct facilities," Paczynski said. "We wondered if we were going to be able to pull it off, but we did. There were no delays at all due to assembly of equipment. We were ready.'

STS-3's landing was scheduled for March 29, 1982, but a raging dust storm at Northrup caused a one-day wave off. But at 9:05 a.m. the next day, Columbia landed. A subsequent bill put forth in Congress by then U.S. Senator from New Mexico and former Apollo astronaut Jack Schmitt changed Northrup Strip's name to White Sands Space Harbor. Also, an engraved survey monument was set at the point where astronauts Jack Lousma and Gordon Fullerton met their families and the spot was named "Columbia Site" by Major General Alan Nord, head of WSMR.

No other shuttle landing has been made at WSSH, and the landing field's flight role had diminished some following the first missions and the advent of landings on concrete runways at Edwards and Florida's Kennedy Space Center. But, for the return-to-flight in



Left: The Space Shuttle Columbia is mated with a Boeing 747 for ferrying back to Kennedy Space Center following its March 30, 1982, landing at what was then called Northrup Strip. Above: Al Paczynski looks out over a runway at White Sands Space Harbor (WSSH). Below top: Paczynski removes a piece of debris from the area where *Columbia* was about to be mated with the Shuttle Carrier Aircraft. **Below** bottom: Shuttle Training Aircraft (STA) are framed in the hangar door at El Paso International Airport.

1988, WSSH was again designated the prime alternate landing site for the shuttle, a role it retains today.

Several modifications were made to WSSH during the 32 months following the Challenger accident, including laser-smoothing of the main runway and a new mating and servicing area located away from areas threatened by blowing sand, a problem experienced during STS-3, Paczynski said. This year, a third runway, an almost exact duplicate in size and appearance to the runway at Ben Guerir, Morroco, was built to allow astronauts to train for Trans-Atlantic Abort Landings (TALs).

'This is a JSC landing site, not many people realize that. It's not Dryden's, not WSMR's, the Air Force's, not the Cape's," Paczynski said. "This is a JSC private airfield for training and orbiter landings.

Although only one shuttle has landed there, WSSH always has been an indispensable training field, scheduling an average of 10 STA sessions a week for use by up to three planes flying concurrently. The STAs are Grumman Gulfstream II aircraft that have been highly modified to mimic the flight characteristics of the shuttle during landing, and training flights simulate the descent of the shuttle from 10,000 feet to touchdown. The planes used at WSSH are housed in NASA facilities at the El Paso International Airport.

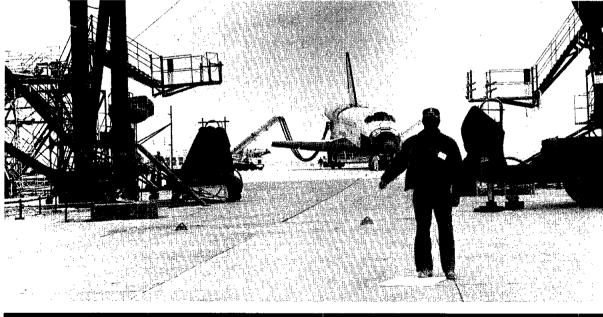
The Space Harbor operates for two shifts daily and is staffed by 17 Lockheed Engineering and Science Corp. technicians, two quality assurance personnel, five Holloman crash and rescue team members, and four Kennedy Space Center employees. The KSC workers maintain WSSH's convoy equipment, machinery that was transferred to WSSH from the halted Vandenberg launch complex.

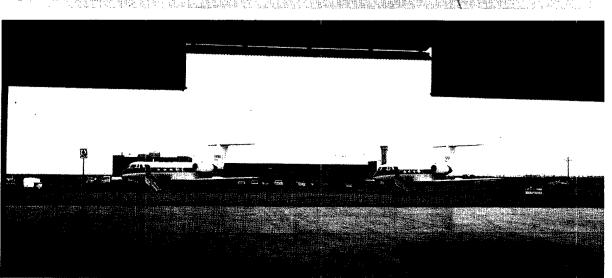
WSSH's future assignments may include roles as a recovery site in the Reusable Reentry Satellite Project, the Crew Emergency Return Vehicle Project and the National Aerospace Plane Program, Paczynski said. But roles as the prime training ground and an alternate and contingency landing site for shuttle pilots will remain top priority.

Training is done both day and night at WSSH, thanks to lights that can blare a total of more than 11 billion candlepower across the desert.

"At night, it really looks fantastic, like a Christmas tree," Paczynski said. "There are red and white PAPI (Precision Approach Path Indicator) lights. There are strobes flashing. There are approach lights that are white, reflectors that are yellow, blue distance-to-go lights, almost every color you can think of.

"This place has been a bomb drop area; it's been any number of things," Paczynski added. "I think its highest use has been as a spaceport.'





## Scioneaux heads Logistics Division

Alfred A. Scioneaux Jr. has been JSC appointed chief of the Logistics Division within the Center Operations Directorate.

Scioneaux will manage a complex logistics program involving acquisition, accountability and disposal of all supplies and equipment, moving, hauling, shipping and personnel travel. He will lead four branches and directs the efforts of 63 civil servants and about 200 contractors.

The Logistics Division operates on an annual budget of \$17 million, watches over a supply inventory that exceeds \$25 million, and provides accountability for \$400 million in equipment throughout JSC.

Scioneaux succeeds Elsie M. Easley, who retired from NASA.

### Kohrs to receive **Gilruth Trophy**

Richard H. Kohrs, director of the Space Station Freedom Program, will receive the North Galveston County Chamber of Commerce's Gilruth Trophy on Oct. 5.

Kohrs, a Dickinson resident, will be honored as a North Galveston County citizen making substantial contributions to continued progress in space flight at the chamber's second annual

Space Flight Banquet at the South Shore Harbour Resort and Conference Center in League City.

NASA Administrator Richard H. Truly will give the keynote address at the banquet. Mission Operations Director Eugene Kranz, 1988 recipient, will present the trophy to Kohrs.

Before moving to Headquarters, Kohrs was deputy director of the NSTS Program Office at JSC.

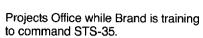
### Walker gets Brand's space station work

Astronaut David M. Walker has been appointed to replace Vance Brand as assistant manager for space station assembly in the Space Station





**Scioneaux** 



Walker, a Navy captain and veteran of STS-51A, will be responsible for managing all JSC space station assembly efforts and integration of JSC line organizations and Work Package 2 contractor support. He will serve as the JSC interface for assembly operations with the Level II program Office and







### Tarpley earns award

Jean T. Tarpley, secretary to the director of Space and Life Sciences, received August's Marilyn J. Bockting Secretarial Excellence Award.

Tarpley, who is responsible for all secretarial and clerical duties within the directorate, received a plaque and \$500. She was cited for boosting productivity by building a team spirit among the secretarial and clerical staff.

## **Board announces** senior promotions

JSC's Senior Promotion Board Scott, Paul E. Shack, Charles R approved 28 nominees for dual career ladder promotions in September, based principally on expanding job responsibilities and scientific and engineering impact.

The promotions to the GS-14 and -15 levels were made separate from those selected through the Competitive Placement Plan in an effort to ensure that nominees in both paths receive consideration.

Those receiving promotions, which become effective Sunday.

Mission Operations Directorate: William H. Gerstenmaier.

Engineering Directorate: Maurice C. Brooks, Robert G. Brown, A. Reid Farley, Melvin H. Kapell, Edward T. Kubiak, Fred W. Martin, Carl D. Thomas and Charles F. Whitsett.

Mission Support Directorate: Ellis

NSTS Program Office: Rafael G. Gonzalez, Jene A. Richart.

NSTS Operations Integration Office: Garv C. Wilson. New Initiatives Office: Barney B.

Roberts, Lewis C. Wade and Robert J. Williams. Space Station Projects Office:

Patricia A. Bahr, J.T. Chapman and Bobby K. Kyle.

Space and Life Sciences Directorate: Charles T. Bourland, John B. Charles, Martin E. Coleman, Michael C. Greenisen, Fred Horz and Gordon A. McKay.

Orbiter and GFE Projects Office: John M. Crockett.

## Mercy ship gets space lessons

Karen Madden and Richard McDonald order NASA educational materials.

Tom Holladay, Teacher Resource Center Coordinator for Omniplan Corp., helps mercy ship crew members

By Barbara Tomaro

Many teachers from a variety of backgrounds have visited the JSC Teacher Resource Center (TRC) over the years. On Sept. 13 however, a group arrived to obtain educational packages and videos for a very special classroom, the international mercy ship M/V Anastasis.

The nine educators and crew members who visited the TRC requested materials on aerospace activities, the Solar System, and the shuttle for children from kindergarten age through the eighth grade.

"They came to gather materials to teach children from third world countries the benefits of having a space program," said Tom Holladay, TRC coordinator. "For example, they wanted their students to have a clearer picture of the Solar System, and to be able to talk about new and better medicines and experiments.'

The interdenominational mission ship's crew is made up of volunteers from 30 countries who take food, supplies, construction help and medical aid to persons in underprivileged or disaster-stricken countries. Crew volunteers pay \$150 a month for room and board.

The crew tries to spread its message through deeds rather than words, according to teacher Karen Madden, a member of the crew. "It's difficult to give people a belief in God when they are barefoot and hungry," she explained.

After being invited to visit a country, a mercy ship like the Anastasis arrives with donated supplies and volunteers to aid in whatever way they can. Doctors, dentists and construction engineers volunteer their time to help.

## Child care group seeks aid

Space Family Education Inc. has Child Care Center Committee adviser. begun the first of many donation drives to totally outfit the JSC Child Care Center in necessary equipment and supplies needed by its scheduled opening in May 1990.

A complete list of equipment items needed for the center's start-up is available from Mary Allen, at x33087. Needed items are listed according to area, such as infant and pre-toddler room, toddler and 2-year-old room, preschool room, kitchen and laundry, office and reception area, and general facilities.

Donations of used items in good condition, or monetary donations to be used toward the purchase of new items are welcome, according to Mary Allen,

'We're hoping people will check their attics and garages to see which of the items on our list they might be willing to donate," said Allen. "If an individual or group would like to donate the purchase amount of a particular item, we will find a way to give them credit for their donation, with a small inscribed plate on the

a part of the child care center itself." Items needed run the gamut from appliances to toys, bedding, kitchen items, children's furniture, playground equipment and office items. Purchase prices and the person to contact appear on the list. For more information, contact Allen at x33087.

item. That way they can feel more

### Computer virus disinfection team ready to assist

(Continued from Page 1)

around for years," Simanton said. harmless or have the ability to destroy loads a hidden virus that infects the "Historically they go back into the '70s, or after data, or to take up so much but the popularity of the PC and the transportability of data has made the computer virus in the last few years a very dangerous thing."

The problem is serious enough that JSC managers are developing a policy statement that will restrict users from bringing unapproved programs on-site. That policy should be announced within two months. The center already has a policy that prohibits public domain or shareware from being loaded onto any mission critical device.

There are two basic types of vir-

uses—one that is transferred by users is approaching \$200,000, he computer disk and another that spreads through communications loads a new public domain or share-"Computer viruses have been networks. Either may be relatively ware program on his or her PC also of the computer's memory that it becomes unusable, he said.

> Sometimes, even a relatively harmless virus can cause serious problems, he said. One such virus that has affected JSC was known as the Christmas tree virus because it made a Christmas tree appear on the computer screen. This in itself was not a big problem, but then the virus would look at the user's distribution list and send itself to everyone on the list. Some users had very large lists. The activity bogged down communication net

works and consumed work time.

With a disk-spread virus, a user who computer's hard disk memory. Whenever that user shares one of his or her programs, the virus is shared as

JSC has established a Virus Disinfection Team, he said, which is on call to diagnose and disinfect PCs that have been exposed. If a user thinks his computer may have been infected, he should report it to the JSC Help Desk at 280-4800, which can dispatch the

Steve York, a Computer Sciences Corp. employee who serves as the team's leader, said the best way to

refrain from downloading programs from bulletin boards or other sources of public domain programs unless you are sure of the source. Also, he said, it down." software machines.

Simanton said JSC computer users are urged to install only approved, packaged software obtained through DPSD or JSC Procurement.

York said there are several good virus checking programs that are public domain and available on bulletin boards. Users can run the program on itself and then go from there. His group, in fact, currently uses public domain packages when it goes out to disinfect

"But the virus hackers out there are

protect yourself against viruses is to always working to beat the latest and greatest anti-virus programs," he said. Someone's building a fence and someone's coming along and tearing

> York recommended that anyone who suspects their computer has a virus call the DPSD Help Desk and ask for the virus team. The team will disinfect the user's machine, then try to determine where it came from.

Virus signs to watch for in a Macintosh are changes in icons in the system folder, problems running large applications or problems printing. Signs to watch for in IBM-compatible machines are unexpected slowdowns, more frequent system crashes or programs suddenly becoming to big to fit into memory.

## Recycling group sets sights on entire center

(Continued from Page 1) each floor. Employees are encour-

aged to throw away food items there to prevent problems with roaches and other pests.

"If the pilot program is as successful as we think it will be," said Williams, "the next buildings on our list, chosen for their high computer, and/or white paper usage, include 46, 16, 5, and 4.1

Williams noted that computer paper provides the greatest value to the

center, with a return of approximately \$200 per ton. In comparison, the return for white paper is about \$60 a ton.

The JSC Recycling Committee was formed in response to a memo by John Young, assistant to Director Aaron Cohen for engineering, operations and safety, urging the adaption of conservation programs at JSC. Based on a three-month study, the committee, made up of Williams, Vice Chairman Mike Scott, Mary Mueller, Jim Doyle, Joe Zamaitis, Dale Martin

and Bob Nooney, recommended to management including a building with a large volume of paper (227) and one of the largest multi-user facilities on site (Bldg. 45) in the initial test program. Research indicated there was a market for recycled waste paper, pinpointed the types of papers that were the most feasible to recycle, and that JSC could benafit directly from the project by having the return on the recycling credited to its custodial account with Best Waste Inc.

## **Space News** Roundup

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Editor . . . . . . Kelly Humphries Associate Editor . . . . Linda Copley

### Mishap simulation set

JSC medical, emergency, aircraft and security personnel will simulate a mishap involving a T-38 aircraft Wednesday at Ellington Field.

The simulation will exercise the JSC Mishap Plan, said Dr. Philip Stepaniak who is coordinating the simulation. Participants will include Aviation

Safety, Aircraft Operations Division, Ellington Fire Department, Ellington Crash and Rescue, JSC Security Division, JSC Television Office, JSC Photography Support Branch and JSC Medical Operations Branch.

NASA-JSC