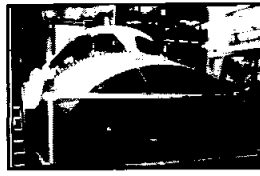




Getting ready

Astronauts from JSC have been keeping a close watch on STS-29 preparations at Kennedy Space Center. Photos on Page 3.



Orbiter progress

The new Space Shuttle Orbiter is coming together at Rockwell International's facility in Downey, Calif. Another photo on Page 4.

Space News Roundup

Vol. 28

February 17, 1989

No. 7

Black history program focuses on churches

A keynote address by Municipal Judge Sheila Jackson Lee and a panel discussion featuring representatives of five Houston-area colleges and universities are highlighting JSC's 1989 Black History Month Program.

The program, centering around the national theme "The Role of Afro-American Churches in Economic, Political and Social Development at Home and Abroad," began Thursday and continues today. Civil service and contractor employees are invited to attend as their workloads permit.

"We feel that this year's program

is relevant to the interests of the community," said Dr. Joseph Atkinson, chief of JSC's Equal Opportunity Programs Office. "We feel that Afro-American churches have made a significant contribution to the well-being of the nation and will continue to affect the lives of our citizens."

"We're deviating from the norm a bit," explained Bob Jenkins, chairman of the Black History Month Committee. "We attempted to get some innovative kinds of people—provocative—but at the same time some movers and shakers.

"Traditionally we have been getting male speakers," Jenkins said. "But there are a lot of dynamic women out there, too. Judge Sheila Jackson Lee is a very dynamic speaker and she's more in tune with what's going on in our area. She represents sort of a new era. It's quite an accomplishment for a black person to become a judge and an even greater accomplishment for a black woman to become a judge."

Jenkins said the church-oriented program is relevant to JSC because many of the blacks who work here

were motivated by their involvement in religious activities.

"A lot of people got inspiration from their ties to the church that helped them get into the space program. Like Ron McNair for instance, who was heavily involved in church activities."

Today's ceremonies begin at 1 p.m. in the Bldg. 2 Teague Auditorium with a song by Black History Committee Member Wendell Key, and a duet by Carla Hendricks and J.D. Duncan.

Mrs. Cheryl McNair then will present the Ron McNair Scholarship to
Please see **BLACK**, Page 4



Judge Sheila Jackson Lee

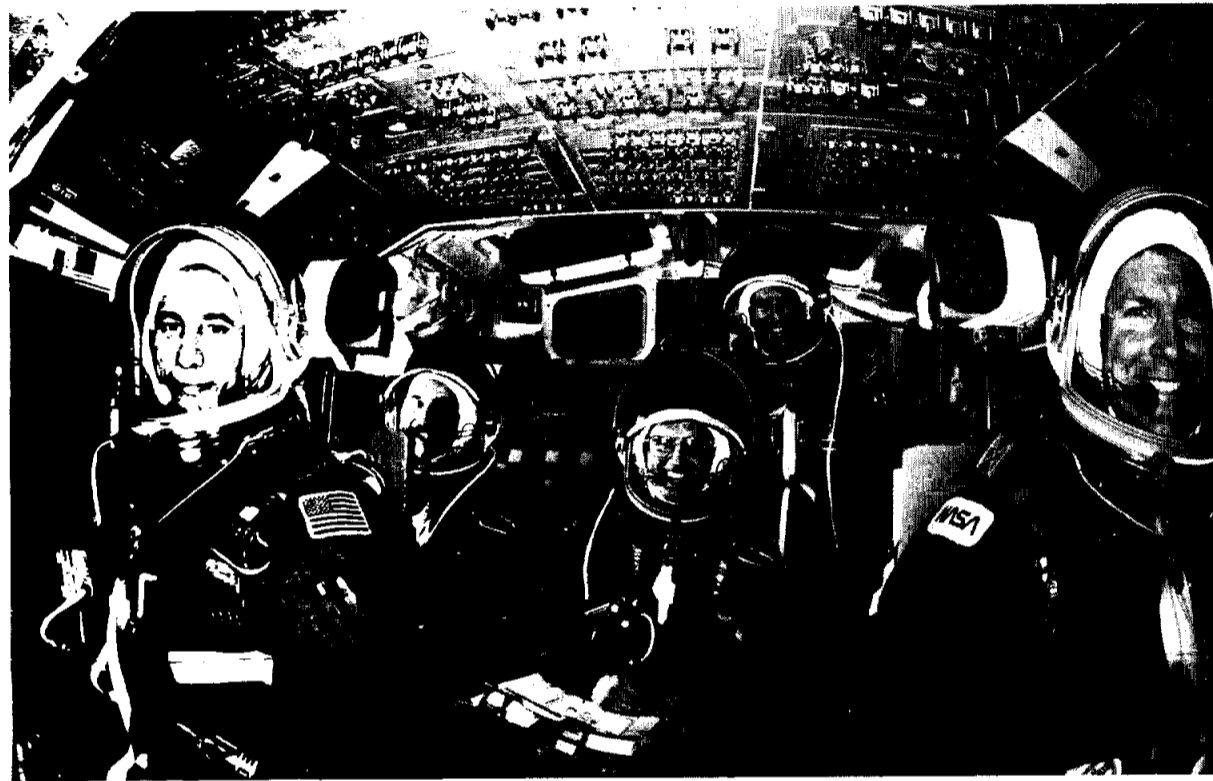


Photo by Bill Bowers

STS-29 crew members take part in an exercise inside the Crew Compartment Trainer in JSC's Bldg. 9A. From left are Pilot John Blaha, Mission Specialists Jim Bagian, Jim Buchli and Bob Springer, and Commander Michael Coats. The photograph was taken using a wide-angle camera lens, which causes the faces of the astronauts to appear elongated at the edges of the photo.

Turbopump replacement goes quickly

By Kyle Herring

The processing flow for STS-29 is now tracking about one day ahead of schedule with delivery and installation of all three high pressure oxidizer turbopumps completed, leading to a launch no earlier than March 10.

An official target launch date will be set following the flight readiness review on March 3.

Proceeding more quickly than expected, workers at Rocketdyne, and the Stennis and Kennedy Space Centers processed, tested and installed the three replacement pumps ahead of the previous target delivery date of Feb. 17.

"It looks like we will be able to make the schedule," said Floyd Bennett, Rockwell project engineer for Space Shuttle main engine integration. In fact, he added, "the pump deliveries are a couple of days ahead of schedule."

Shuttle program managers called for the oxidizer pump changeout to prevent the development of cracks caused by stress corrosion due to moisture inside the pumps similar to one found on a pump following last December's STS-27 mission. The

baking process now used to dry the pumps after manufacture has been changed to allow any excess moisture to dissipate before shipment.

The progress made has allowed program managers to recommend a "go" for power up of batteries for both the Tracking and Data Relay Satellite-

D (TDRS-D) and its inertial upper stage (IUS). Powering the batteries now—initiated approximately three weeks before launch—protects an STS-29 launch opportunity between March 9-23.

In parallel with the oxidizer turbopump replacement, workers conducted a 22-hour interface verification test of the TDRS-D and the IUS. The procedure verified that all connections between the payload and *Discovery* are complete. It also affirmed proper interface with the flight deck control panel used to monitor and deploy the TDRS-D/IUS during the mission.

Meanwhile, processing for the next flight of *Atlantis* on STS-30 continues to go smoothly. Stacking operations on the solid rocket boosters are scheduled to be completed this weekend with mating of

Please see **STS-29**, Page 4



Badges mandatory for visitors

By Linda Copley

Changes in JSC policies related to unofficial visitors now require employees to obtain temporary badges for any guests they wish to escort into buildings or areas not open to the general public.

The policy change also applies to visits to sponsoring employees' private offices, and also requires spon-

soring employees to escort their unofficial guests at all times when visiting non-public buildings on site.

All self-guided employee tours of the Space Shuttle and space station trainers and mock-ups in Bldgs. 9A and 9B have been cancelled, as well.

"The changes were necessary to better supervise control of unofficial visits by personal visitors and family

members," said Bob Gaffney, chief of the Security Operations Branch.

Most of the new guidelines became effective in mid-January, after several months of review by center management, the Public Affairs Office and the Security Division.

The moratorium on self-guided employee tours in Bldgs. 9A and 9B
Please see **BADGES**, Page 4

Computer move takes advantage of long weekend

By Linda Copley

The first in a string of three-day weekend computer moves—from Bldg. 12 to the just-dedicated Central Computing Facility in Bldg. 46—begins today.

The Data Processing System Division (DPSD) will orchestrate the transfer of the Software Development Facility (SDF) from Bldg. 12 to Bldg. 46 today through Monday, said DPSD's Clyde Waters, coordinator of the migration. The string of moves will continue through the Labor Day holidays, he said.

"We plan to have the system on-line by the time employees arrive Tuesday morning," Waters said. "In fact, if they haven't heard it's happening, they should never know the difference."

The SDF is used to develop new capabilities for the Shuttle Orbiter onboard computers. The resulting software is then sent to the Software Production Facility (SPF) in Bldg. 30 for verification and testing. Currently occupying a large portion
Please see **COMPUTER**, Page 4



JSC Director Aaron Cohen and Mission Support Director Ron Berry cut the ribbon at the Bldg. 46 grand opening.

JSC Photo

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People

JSC scientist edits series

JSC Space Scientist Faith Vilas is co-editor of "Mercury," the latest of 15 volumes of the internationally recognized Space Science Series published by the University of Arizona Press.

Vilas edited the 750-page book with Clark R. Chapman of the Planetary Science Institute, Tucson, and Mildred Shapley Matthews of the Lunar and Planetary Laboratory at the University of Arizona.

The new book on the planet closest to the Sun is an outgrowth of a 1986 conference containing the research of 47 collaborating authors. It includes a benchmark for testing theories about the origin of terrestrial planets and discussion of Mercury's metal-rich composition, thermal and geophysical evolution and cratering history.

Demers receives secretarial honor

Gloria F. Demers, executive secretary to Flight Crew Operations Director Don Puddy, has received the Marilyn J. Bocking Secretarial Excellence Award.

Demers, who has overall responsibility for providing secretarial and administrative support to Puddy and his staff, received a plaque and a \$500 check.

The award specifically cited Demers for assisting Puddy as he assumed his job as director in January 1988, and her ability to adapt to different staff members' writing styles to produce final non-technical memoranda.



Demers

Today

AFCEA meets—The next meeting of the Armed Forces Communications and Electronics Association (AFCEA) will be at 11:30 a.m. Feb. 17 at the Nassau Bay Hilton. Texas Sen. J.E. "Buster" Brown will discuss legislative activities of interest to the Clear Lake area. Admission is \$8 for members and \$10 for nonmembers. For more information, call Debbie Williams, 282-4952.

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.

Saturday

Runners needed—The NASA corporate team is seeking runners in the Conoco 10-kilometer race Feb. 18, or the upcoming Galveston Marathon. For more information, call Luis Rodriguez at x38669, or Mike Evans at x37667.

Gem and mineral show—The Clear Lake Gem and Mineral Society will hold its 14th annual Gem, Mineral and Jewelry Show Feb. 18-19 at the Pasadena Convention Center, 7902 Fairmount Parkway. The show will feature demonstrations of lapidary, faceting and diamond sawing of rocks. Children will be able to participate in a gem mine and other hands-on projects. Show hours are 9 a.m. to 8 p.m. Feb. 18, and 10 a.m. to 5 p.m. Feb. 19. For more information, call Mack Robinson at x30803.

Monday

Cafeteria menu—Special: meat sauce and spaghetti. Entrees: franks and sauerkraut, sweet and sour pork chop with fried rice, potato baked chicken. Soup: cream of potato. Vegetables: French beans, buttered squash, lima beans.

Tuesday

ASME meets—The Aerospace Technical chapter of the American

Society of Mechanical Engineers (ASME) will meet at 6 p.m. Feb. 21 at the King's Inn on NASA Road 1. Ronald Kahl of JSC's Lunar and Mars Exploration Office, will present an overview of the Mars Rover Sample Return mission. For more information, call Sam Veerasamy at x31725, or Edward Carter at 333-6791.

Cafeteria menu—Special: smothered steak with dressing. Entrees: beef stew, liver and onions, shrimp creole. Soup: navy bean. Vegetables: buttered corn, rice, cabbage, peas.

Wednesday

Information systems conference—An all-day conference entitled, "Information Systems for Project Management: Coordinating Large, Complex Computing Systems," is scheduled for Feb. 22 at the Westin Oaks-Galleria in Houston. Brenda Dervin of Ohio State University will give the keynote speech on "Making Information Systems Work: The Human Dimension." For more information call 488-9433.

Astronomy seminar—The JSC Astronomy Seminar will meet at noon Feb. 22 in Bldg. 31, Rm. 193. J. Pollock and P. O'Neill will discuss "Radiation Induced Effects on Solid State Devices: the Antarctic Experiment." For more information, call Al Jackson, x33709.

Cafeteria menu—Special: salmon croquette. Entrees: roast beef, baked perch, chicken pan pie. Soup: seafood gumbo. Vegetables: mustard greens, Italian green beans, sliced beets.

Thursday

AIAA meets—The Houston Section of the American Institute of Aeronautics and Astronautics will meet at 5:30 p.m. Feb. 23 at the Gilruth Recreation Center. Pat Rawlings of Eagle Visuals-Eagle Aerospace Inc., will discuss "Space Art: An Engineering Tool." Cost is \$8 for members, \$10 for non-members,

and \$7 for students. Reservation deadline is Feb. 17. For reservations or more information, call Judy at 282-3782, or Frankie at 333-60064.

Quality conference—The second annual South Texas Quality, Productivity and Data Systems Conference, sponsored by the American Society of Quality Control (ASQC) will be Feb. 23-24 at the University of Houston's Hilton Conference Center. For more information, call Eugene Berger, 333-0967.

Cafeteria menu—Special: stuffed cabbage. Entrees: beef tacos, ham and lima beans. Soup: beef and barley. Vegetables: ranch beans, Brussels sprouts, cream style corn.

Feb. 24

Cafeteria menu—Special: Salisbury steak. Entrees: fried shrimp, deviled crabs, ham steak. Soup: seafood gumbo. Vegetables: buttered carrots, green beans, June peas.

Feb. 28

Technical papers—The Houston Chapter of the National Technical Association (NTA) is seeking innovative papers and abstracts on aerospace, computers, electronics, software engineering and related topics for presentation at the NTA annual Technical Symposium April 7-8 at the Doubletree Hotel-Allen Center. The symposium theme is "Technology: The Roots of Our Future." Deadline for submissions is April 28. Send a brief abstract and biographical sketch, both 300 words or less, to Carrington H. Steward, VE3, or William Williams, EB2. For more information, call Donna Blackshear at x30574, or Rae Martel, x34160.

BAPCO meets—The next meeting of the Bay Area PC Organization (BAPCO) will be at 7:30 p.m. Feb. 28 at the League City Bank and Trust. For more information, call Earl Rubenstein, x34807, or Ron Waldbillig, 337-5074.

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:

FBA membership cards (available to civil service employees and retirees): free. Premium membership (includes Houston Gold C coupon book): \$4 for NASA employees; \$5 for contractors.

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

AMC Theater (valid until May 31): \$2.95 each.

Sea World (San Antonio, year long): adults, \$17.25; children \$14.75.

Rodeo—Crystal Gayle (Feb. 20, 7:45 p.m., Astrodome): \$7.50.

Rodeo—Larry Gatlin (Feb. 24, 7:45 p.m., Astrodome): \$8.50.

Rodeo—Reba McEntire (Feb. 26,

7:45 p.m., Astrodome): \$8.50.

Rodeo—Barbara Mandrel (March 4, 7:45 p.m., Astrodome): \$8.50.

Rodeo—Alabama (March 5, 4 p.m., Astrodome): \$8.50.

Go Texan Rodeo Trip—Charlie Pride (Feb. 25, 3 p.m., Bay Area Park and Ride departure): \$13.

Same Time Next Year (Feb. 17, 8:15 p.m., League City Civic Center Auditorium): \$5.

The Arkansas Bear (Feb. 18, 7 p.m., Bayou Theatre, UHCL): \$3.

Pericles, Prince of Tyre (April 22-28, 8 p.m., Satellite Theatre, UHCL): \$4.

Weekend in Galveston (Feb. 25-26, tour on "Colonel" paddlewheeler, "Cabaret" performance, accommodations at Hotel Galvez, Sunday brunch): \$75 per person, double occupancy.

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

Property

Sale: 60 acres, 3 miles from Karnes City, on Hwy. 80, 50 mi. from San Antonio. 783-9164.

Sale/lease: 10 acres on FM 517, 1/2 mile west of Hwy. 146, barn, stocked ponds, util., and more. 484-7834.

Rent: Lake Livingston waterfront, 3-2, fully furnished, covered decks, pier, new cond., wood FPL, ex. fishing, week or weekend. 482-1582.

Sale: Middlebrook, 3-2-2, study, FPL, wet bar, covered patio, large lot, ex. cond., FHA assum., 10%. 480-9363.

Sale: Friendswood/Wedgewood Village, 3-2-2, well kept home, large living room w/ cathedral ceiling, covered patio, estab. neighborhood, new paint inside and outside, new carpet, \$59,900. Rao, 482-3697.

Lease: Tranquility Lake condo, 1-1, W/D, FPL, microwave, sec. gate, \$375 plus dep. 333-3999 or 488-4003.

Sale: Friendswood/Sun Meadow Estates, wooded lot in estab. neighborhood, cul-de-sac, bordered by stream and golf course on 2 sides, approx. 245' deep and up to 86' wide, util. on site, \$31,500. Doug, x32860 or 486-7412.

Rent: Beach house, adjacent to San Luis Pass fishing pier, first row, 2 BR, weekends or weekly. 894-0979.

Sale: Forest Bend/Friendswood, 3-2-2, den, screened-in porch, ceiling fan, new paint, assume 9.5%, \$515/mo. Nick, x31920 or 996-7917.

'81 Honda Accord LX, ex. cond., 93K mi. 482-1582.

'29 Mercedes Replicar, still in kit, Ford frame, takes a Pinto or a Mustang II, was \$8,000, now \$5,500. 484-7834.

'86 Honda Civic, 5 spd., DX hatchback, new Pirelli tires, Clarion AM/FM cass. stereo, A/C, tilt steering, champagne color, ex. cond., \$6,200, OBO. Tammy, x33945 or 332-0207.

'66 Classic Mustang, 289 V-8, blue "Emron" paint, auto, A/C, P/S, AM/FM-cass., alarm, good tires, 10K mi. since O.H., classic car value, \$5,750, OBO. Susan, x35016 or 471-8072.

'79 Mercedes Benz 300 SD turbo diesel, silver, 4 dr. w/royal blue int., power sunroof, cruise, \$10,200. 796-1107.

'76-'81 Honda Accord, new A/C car compressor, \$200, OBO. Vincent, x30874 or 333-1316.

'88 Toyota Supra Turbo, 29K mi., A/C, P/S, ABS, AM/FM cass., P/B. 486-4371.

'78 Buick Skylark, V-6, new battery and tires, 70K mi., \$750. x33415 or 332-4333.

'73 Ford Gran Torino, 4 dr., P/B, P/S, A/C, clean, runs good, no body damage, \$600. x33201.

'85 Bronco XLT, 5.8L, loaded, ex. cond., must see to appreciate, black/silver, tinted windows, low miles, like new, \$11,800, OBO. 332-7041.

'63 Olds Delta 88, classic, V-8, 4 dr., it. blue, auto, trans., P/S, P/B, radio, A/C, one owner, low mi., new tires, new battery, \$2,950. Fred, x39109.

'86 Chrysler Fifth Avenue, fully equip., AM/FM stereo, tape, wire wheel covers, gunmetal metallic, low mi., like new, below NADA, \$9,900. 482-1535.

'84 Ford Escort GT, black, 2 dr. hatchback, tinted windows, cruise wheels, 5 spd., A/C, AM/FM stereo, cassette, cruise control, sun roof, great shape, \$3,500, OBO. Quintel, 333-4285.

'85 Honda CRX, 5 spd., 40K mi., 1 owner, AM/FM/cass., ex. cond., \$4,500. Marty, 488-9044.

Cycles

'84 Honda CR500R dirt bike, ex. cond., \$1,000. Debbie, 480-6154.

'85 Honda Shadow 500, low mi., w/windshield, ex. cond. x36462 or 996-1410.

Honda CR125 dirt bike, very good cond., \$250. 474-2200.

Boats & Planes

Trolling motors; Mercury thruster plus, 36" shaft, 28 lb. thrust, \$150; Minnkota 65, 30" shaft, 28 lb. thrust, \$100, both ex. cond. 538-1600.

'85 Conroy (Glastron) X19 - 19' Stren Drive pleasure boat, 140hp Mercruiser, walk thru windshield, versatile family boat, many extras, ex. cond. Jim, 282-4029.

New unopened royal scale R/C planes, B-17 flying fortress was \$269, now \$160; Cessna Skymaster (push-pull), was \$249, now \$140. Trey, x36759 or 482-7814.

Bic windsurfer, great beginner board, ex. cond., \$350. 474-2200.

Audiovisual & Computers

80 character printer stand, table top, three levels, printer on top, incoming paper on bottom, outgoing paper in middle, brand new, never been used, \$35. Bryan, 282-3277.

Amiga 1000, 512K, high resolution color monitor, software, like new, \$950. x38872 or 333-3526.

Avatex 1200 (baud) modems (2), Tandon TM 50-2, DS/DD disk drives (2), \$50/ea. Bill,

x38544.

Commodore 128, (2) 1571 disk drives, 1200 baud modem mono monitor, star Slio-C printer, C64 and C128 software, sell all or part, BO. Richard, 488-5969 or 486-7690.

Apple IIe enhanced, A.E. Ramworks 80 column memory card, 385K RAM, 2 disk drives, parallel printer port, 300 baud modem card, CPM card, NEC monochrome monitor, system saver w/fan, programs, \$900, OBO. John, 991-3753.

Anyone who can run IBM ISPF Edit Macro from JCL, please call x37671.

Atari 1040 ST color system, good cond., \$750. Duane or Joann, 484-5927.

Atari 2600 and 20 game cartridges, \$50; AKAL 7" reel to reel and 15 tapes, \$100; TRACKSTAR Apple II card and Apple disk drives for your IBM PC/clone, was \$500, now \$350. Tony, 280-1564 or 482-4156.

Household

Pecan dining table, 4 swivel chairs, good cond., \$45. Cliff, x38166 or 486-8810.

Antique hump back steamer trunk, 34L x 21W x 28H, has 95% HDW/trim, \$195; elect. dust collector for furnace, H/P, "Edison", w/pressure switch, 800-1600 CFM, was \$380, now \$150; mirrors, gold-veined (2), 45 x 91 1/2, \$100/ea. Doug, x32860 or 486-7412.

RCA 25" color TV, oak console (swiveling), perfect cond. and performance, was \$750, now \$325. 485-8930.

Queen size semi-motionless waterbed, mirrored headboard w/six drawers, mattress pad and sheets, \$250, OBO. 280-8855.

7 pc. French Provincial antique white w/gold trim, girls/teens bedroom furniture, set incl. full size headboard, 2 nightstands, dresser, hutch, desk and chair, ex. cond., \$500, OBO. Cathy, x33851 or 996-8835.

Early American living room suite, good cond., \$75. 282-2731 or 482-0547.

Refrigerator, white w/freezer on top, works, \$97. Lea Anne, x38231 or Chuck, 282-2650.

King mattress, box spring, frame, \$100; white 2' x 3' bulletin board, \$5. 326-3370.

Twin size waterbed w/all accessories, ex. cond., \$50. 486-6567.

Sears Kenmore 19 cu. ft. upright frost free freezer, ex. cond., like new, was \$500, now \$275. Tony, 280-1564 or 482-4156.

Traditional sofa and love seat in good shape, brown covering w/coarse texture, \$150 for both. x37267 or 554-6628.

Double bed w/headboard, frame, box springs and mattress, \$60. Dave, x32750 or 333-4852.

Large white metal eight-light chandelier w/metal shades, \$50; multicolor floral metal chandelier, \$40. 326-3370.

Full size Sears-o-Pedic mattress and box springs, very good cond., \$35. Betsy, x30325 or 554-2644.

Captain's bed w/drawers, \$100; full bed, \$30; twin headboard and frame, \$10; wood dining room table, \$10; brown couch, \$30. x38456 or 388-1090.

King size waterbed, low motion, solid oak, contemporary, like new, \$300. Mariann, x39145 or 486-4586.

Wanted

Need one or two more riders for 1988 Dodge van pool, West Loop Park and Ride to NASA area. Richard, x37557.

Want large size mission operations patch (9 1/2"), "new" design, need at least one, but could use three. Kyle, x38653.

Want George Strait rodeo tickets. x31363 or 479-5594.

Want original Apollo art for display during 20th anniversary of Moon landing celebrations, needed now through July 1989. John Trebes, x36302 or 333-4374.

Looking for 1 roommate, non smoker, to live in my 3-2 home in Friendswood, cable, washer/dryer, microwave, VCR and all household privileges included, no dep. or lease to sign, \$200/mo., all bills paid. Mike, x38169 or 482-8496.

Want to buy elec. trains. Don, x37832 or 996-1425.

BIX (Byte Information Exchange). Please send Bixmail to Dono for contact with New Zealand Bixen. 946-3404.

Photographic

Konica TC-X camera and lens, \$150; other lenses for Konica, \$40-\$90, all mint. x30577.

Pets & Livestock

Dickinson, stalls for rent, extra clean, partial and full board avail. James or Sheila, 534-2806 or 333-7098.

Pretty kittens and cats, 1 Siamese, 1 black and white and 1 grey. 783-9164.

Great Dane, full blood AKC, blue color, ears clipped, \$200, includes dog house. Bui, x30223 or 481-6792.

Dickinson, horse pasture for rent, 15-plus acres. 534-2806 or 333-7098.

Musical Instruments

Selmer-Bundy cornet in good cond., \$150, OBO. Terry, 282-3288 or 474-5639.

Miscellaneous

Exercising/workout equip., half price, used 3 times, \$75. 280-8796.

Antique wooden wheel chair, very good cond.; revolving all wood book/magazine case w/drawers, sits on table; pretty plants, fern,

kalanchoe, aloe vera. 783-9164.

Winchester 22 long rifle, \$40; Crosman pellet rifle, \$20; Hornelite E-Z model chainsaw, needs tune-up, \$50. Bill, x38378 or 996-5229.

Barretrailer ski racks, \$60, holds 6 pairs of skis; Kniel 180cm skis w/Tyrolia 150 bindings, \$50. 482-7814.

Boat bottom job, 1/2 price coupon, normal \$14 per foot, for only \$7 per foot, 30 ft. max., call now, coupon almost expired. 280-8796.

Brown alum. camper shell for full size pickup, good cond., \$125, OBO, or will trade for tool box. Curtis, x36439 or 333-7027.

Men's sport jacket, size small, was \$145, now \$45, worn once; men's 26" bicycle, like new. Kathy, x36462 or 996-1410.

Brothers sewing machine w/case, \$60; Amatron clean-air ion machine, \$35. Jeanne, x37472.

Wilson 1200 GE golf clubs, bag and wood covers, \$185. Todd, x32580 or 354-6297.

Huey drafting table Mod. 2011B, adjustable metal base and tilting drawing surface, K&E horizontal/vertical drafting arm, table size 36" x 60", \$300. Emery, x39419 or 353-9449.

G.E. Potscrubber 2 dishwasher in good working cond., \$30. 474-3517.

Stevens Mod. choke 12 gauge pump shotgun in good cond., uses 3" Magnum and 2 3/4" shells, beautifully refinished stock, includes 3 shell plug, \$100. Terry, 282-3288 or 474-5639.

Two surfboards, Eaton "modern longboard" 76" Banzer-trifire, good cond., \$150; custom shaped southcoast thruster 6'10", ex. cond. w/leash and boardbag, \$250. Mike, 554-2320.

1983 Subaru factory service manual, ex. cond., \$20. x30577.

2700 RPM Vega stall speed torque converter for turbo 350/400, \$50. David, 282-4014.

Unused 23K/24K gold plated flatware, 70-piece service for twelve, finest chrome nickel steel, padded storage case, was \$1,200, now \$300. Cliff, x38166 or 486-8810.

Ready to fly!! Radio controlled airplane (Aerobatic) w/motor (S.T. 60) and radio (Kraft 7 channel - 76 series), \$275, OBO. Carlos, x38879 or 554-7727.

30 gal. oceanic aquarium w/light and stand plus all access., \$250, OBO. Carlos, x38879 or 554-7727.

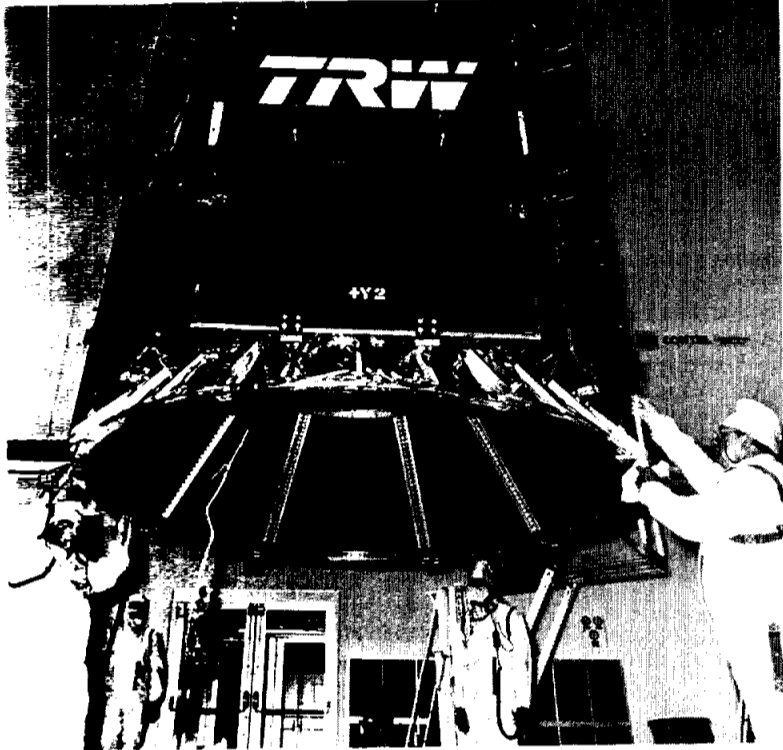
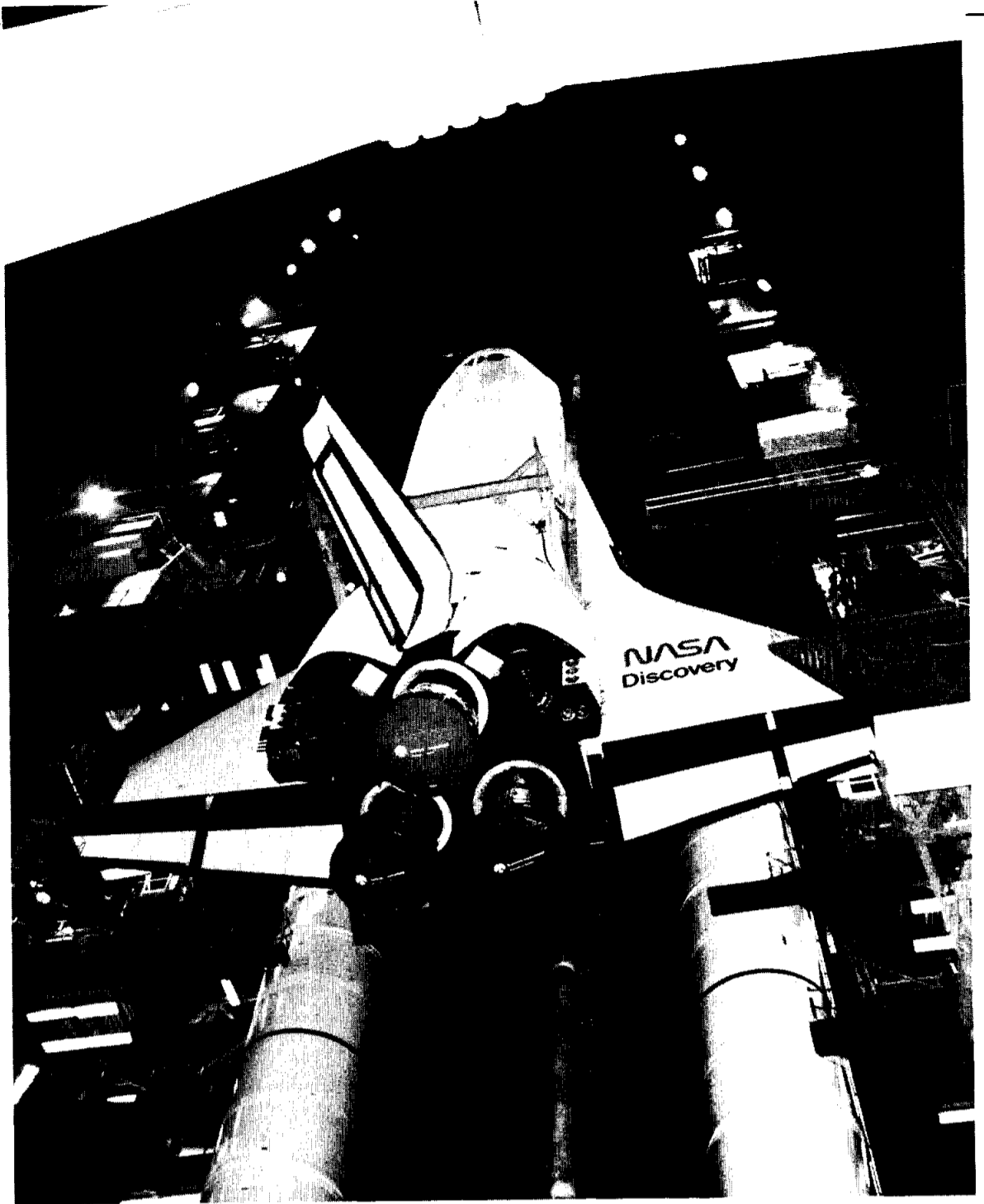
D&D books, Dragon magazines #32, 42, 45-110, Ham maps, books, cities, etc., other FRP goodies. Richard, 486-7690.

New 1847 William Rogers silverplate, knives, forks, spoons, etc., service for 8, plus extra serving pieces in beautiful wooden case. 783-9164.

Camper shell to fit full size pickup truck, cab over w/side windows and full 4' wide rear door, shell only, no interior fixtures, was \$2,000, now \$1,000, OBO. x30978 or 466-5082.

Getting ready

Vehicle preparations for the STS-29 launch of *Discovery* in March have been extensive, as these photos from Kennedy Space Center show. Clockwise from right: *Discovery* is lowered for mating to the external tank and solid rocket boosters in the Vehicle Assembly Building. Next, a technician inspects the area near the three main engines prior to removal of one of three high pressure oxidizer turbopumps. At bottom right, the Orbiter *Columbia*, slated to fly STS-28, a Department of Defense mission, is rolled over from the Orbiter Maintenance and Refurbishment Facility to the Orbiter Processing Facility to be readied for a planned July launch. At bottom left, STS-29 Mission Specialists Bob Springer and Jim Bagian, and Astronaut Mae Jemison inspect the interface between Tracking and Data Relay Satellite-D (TDRS-D) and its inertial upper stage (IUS). Springer and Bagian will be responsible for deploying the TDRS/IUS combination. Next, STS-29 Commander Michael Coats and Mission Specialist Jim Buchli inspect the area of a main engine containing the high pressure oxidizer turbopumps that are being replaced prior to flight. And, immediately below, TDRS-D is hoisted in preparation for mating with the IUS in the clean room of the Vertical Processing Facility.



Badges now mandatory for employees' visitors

(Continued from Page 1)
became effective this past Friday, Feb. 10. It includes all tours beyond the public visitor ropes in Bldg. 9A. This includes the cancellation of "employee time" that traditionally has been set aside from 11:30 a.m. to 12:15 p.m. daily to allow employees to escort family members and personal guests into the Full Fuselage Trainer (FFT) in 9A.

"The changes became necessary because of increased mission training activities within the mock-ups, property management problems and safety concerns," explained newly named protocol chief Barbara Schwartz. "Official business-related tours will be considered for scheduling

and, if approved, conducted by the Protocol Office, based on Public Affairs staffing requirements and mock-up availability."

Additional information on scheduling Protocol tours is available by calling that office at x34885.

Copies of the November 1988 version of JSC Form 337 "Request for Unofficial Visitor Temporary Badging" needed to obtain the necessary visitor badges are now available through Distribution Operations, JM8, or at the security offices in Bldgs. 100, 1 or 30. Completed request forms must be received by Security at Bldg. 100 at least two days before the date of the proposed visit. Badges will be prepared for pick-up at Bldg. 100 upon

the arrival of the visitors.

"The only exception to this requirement," said Security Specialist Patti Hunter, "is that we will approve visitor access for up to six persons to an employee's building only by telephone upon their arrival at Bldg. 100, rather than requiring completion of Form 337. For more than six visitors to an employee's office, and in all other cases requiring access to non-public areas, the form must be completed and approved."

Security Coordinator Tom Davis is responsible for the clearance and badging of official foreign national visitors to JSC. He reminds employees that Form 337 is valid for U.S. citizens and resident alien

cardholders only. The previously used JSC Form 1474 (March 1987) Escort Pass, formerly used by employee "escorts" in place of obtaining badges for their guests, is no longer valid.

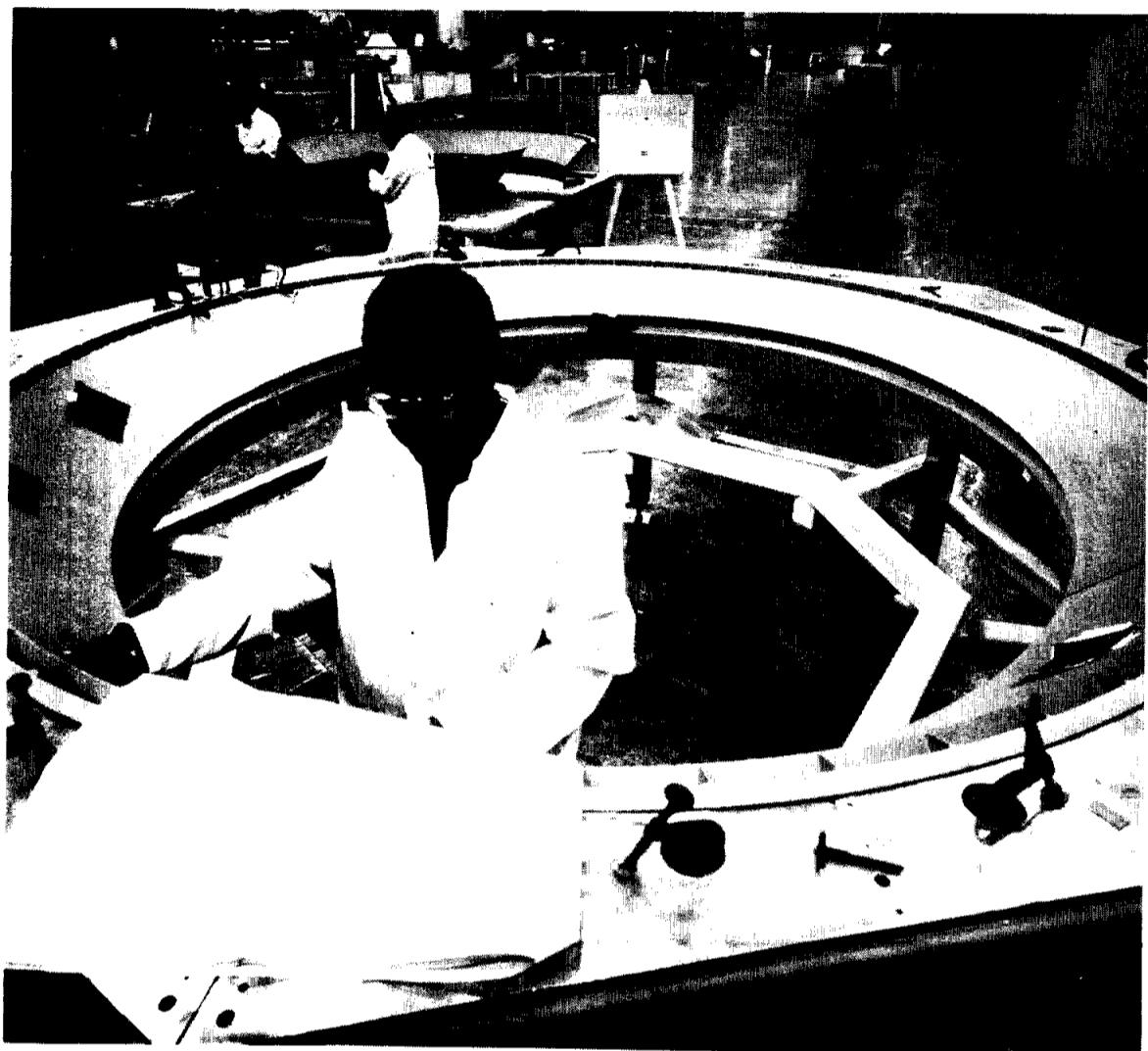
"Employees should contact me, at extension 34068, or Debra Griffin, extension 38218, within the Security Division, in order to have official visits by foreign nationals approved by headquarters. The only foreign nationals not requiring prior approval are those visiting the center on a self-guided, public tour for which a badge is not required."

Davis reminded employees that foreign nationals who are friends or relatives of JSC employees cannot be badged, and therefore may not have

access to non-public buildings or areas on site.

"They are welcomed and encouraged, however, to visit our center on the self-guided tour in the public areas of the center, and may reserve spaces for public Mission Control briefings at the Information Desk in Bldg. 2 the day of their visit," Davis said.

Public buildings on site where visitors do not have to be badged currently include: the Visitor Center, Bldg. 2; Skylab, Bldg. 5; the second floor Mission Control viewing room, Bldg. 30 (by PAO reservation only); Lunar Samples, Bldg. 31A; and the Shuttle Mock-up and Training Facility, Bldg. 9A (not including the roped-off training areas).



ORBITER PROGRESS—A technician at Rockwell International's facility in Downey, Calif., checks OV-105's aft fuselage dome heat shield No. 3 against a blueprint.

NASA Photo

Veteran aircraft is retired after 7 million miles

NASA 2, a "nice old bird" that flew more than 7 million miles as JSC's administrative travel airplane for 25 years, has been retired and replaced by the former NASA 1.

The plane, commonly known as a "G1," had flown the most hours of any Gulfstream 159 in the world. On its last flights Jan. 29-31, the veteran aircraft carried JSC Director Aaron Cohen on a round-trip visit to Washington, D.C., for the Presidential Rank Awards Ceremony.

Mike Roy, project pilot for the changeover at Ellington Field, said the old Gulfstream 159 turboprop had flown 23,429 hours for JSC, which equals 7,028,700 statute air miles. The original life expectancy of the Gulfstream was 20,000 hours.

The airplane had been ferried here in March 1963 by Joe Algranti, now chief of the Aircraft Operations Division at Ellington, and Harold E. "Bud" Ream, now of the Astronaut Office.

The old NASA 2 will be replaced

by the former NASA 1, another Gulfstream 159 that has flown only 16,700 hours. Roy said the new NASA 2 is in "good shape."

It was ferried here from Langley Field in Virginia on Feb. 6, and made its first flight as JSC's administrative airplane on Feb. 7, returning JSC officials from the STS-29 Terminal Countdown Demonstration Test at Kennedy Space Center.

Before the old NASA 2 is placed in storage at El Paso International Airport, some of its parts will be removed and placed on the new NASA 2. Other equipment from the old NASA 2 will replace items on Gulfstreams at Kennedy, Marshall Space Flight Center and Lewis Research Center, Roy said.

Eventually, it probably will be traded in when NASA buys or leases its next new aircraft.

NASA Headquarters has procured a new Gulfstream "G3" turbojet to replace the old NASA 1.

Fellowship applications due

Under the JSC Fellowship Program, the center is now taking applications for employees who want to attend graduate school on a leave with pay basis for one year.

Individuals applying for the program will be selected competitively. The criteria on which that selection will be based include:

- Applicability of the chosen area of study and its effectiveness in contributing to the achievement of JSC's mission and goals;
- A brief statement of academic purpose from the applicant;
- A prior academic course work that has been completed by the applicant;
- A written recommendation from the applicant's division-level chief; and
- The level of activity in the employee's office and the employee's own workload.

Normally, employees chosen for the program will have at least three years of service at the center, service that may include co-op time. Applicants will be reviewed by a panel of senior JSC managers, and the final selections will be made by the JSC director. Although tuition and related fees, excluding travel expenses, will be paid by JSC under the program, application to and acceptance by the graduate school will be the responsibilities of the applicant.

A service agreement requiring a service period of three times the length of training will apply to individuals selected for the fellowships. Applications may be obtained from the Human Resources Development Branch. Completed applications, along with a recommendation from a division-level chief and directorate approval, should be sent to Debbie Hagen at mail code AH3 no later than March 17.

Black history program continues today

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Jacquelin Johnson, a pre-med student at the University of Houston.

Following the scholarship presentation, Judge Sheila Jackson Lee will examine the role of Afro-American Churches in the development of the nation.

Bob Jenkins, chairman of the JSC Black History Month Committee, will give the closing remarks. A reception will follow.

The ceremonies began Thursday morning with an invocation by the Rev. Ronald Materre, minister of music from the New Faith Missionary Baptist Church, and included an

afternoon welcome by JSC Deputy Director P.J. Weitz and closing remarks by Charles Hoskins, JSC's Black Program manager.

Entertainment featured the Golden Voices Concert Choir from Jesse H. Jones High School and a solo by Materre.

A panel consisting of Judge Al Green, Justice of the Peace for Precinct 7 and local NAACP president, the Rev. William Lawson, pastor of Wheeler Avenue Baptist Church and Dr. Joseph Jefferson, professor at Texas Southern University, discussed the national theme.

Thursday afternoon, another panel

discussed the increasing importance of technology in education under the topic "Colleges and Universities: Commitment to the Future." The panel included Jose Castillo, dean of student services for Alvin Community College; Dr. Vanneise Collins, assistant to the president of the College of the Mainland; Dr. William H. Harris, president of Texas Southern University; Dr. Percy Pierre, president of Prairie View A&M University; Dr. Thomas Sewell, chancellor of San Jacinto College central campus; and Dr. Richard Van Horn, president of the University of Houston central campus.

Computer migration just beginning

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at Bldg. 12, the computers will be painstakingly "powered down," disconnected, wrapped in protective material and crated by a crew of support contractors.

"The current Building 46 migration plan for the President's Day weekend move calls for this procedure to be completed overnight Friday, to be ready for the move early Saturday morning to all-new, pristine surroundings on Bldg. 46's second and third floor," Waters said. Once in place, the reverse packing and "power-up" schedule will take the rest of the holiday weekend to accomplish.

The DPSD migration plans call for the three-story, 66,500-square-foot Central Computing Facility to be completely filled by the end of 1989. The first floor will contain office space, tape and data storage areas and areas for large printers and photo-processing systems, mechanical and electrical systems, including the

batteries that can supply up to 15 minutes of uninterruptable power in case of blackouts.

"That's plenty of time to power down the systems for protection in the case of a power outage," said John E. Cools, deputy chief of Data Processing Systems Division.

The pick-up points for all work sent to the facility for completion will be easily accessible on the first floor as well.

The second floor will house an operations control room, a tape library for active data tapes and a large computer area for central processors and equipment requiring "hands on" operation. In addition, electrical rooms for computer support equipment such as motor generators and special computer cooling systems will be located on this floor.

Bldg. 46's top level will contain space to house magnetic disk storage units, communications network equipment, and other computer equipment

requiring little or no "hands-on" operation. "The second and third floors will be our 'clean areas,' if you will, with the least amount of activity that could lead to possible sources of contamination," Waters said.

Although Bldg. 46 will not be a Physical Control Zone (PCZ) area, Waters said, badged employees who wish to enter any areas beyond the DPSD work pick-up point on the first floor will have special access codes for their card keys that will be usable only for the particular rooms and floors they are required to enter. The security system now in place in the building protects individual rooms, stairwells, the elevator and different floors, from entry by unauthorized personnel by a primary, and in some cases a secondary cipher entry system.

Installation of a television monitoring security system to be in placed on each floor, and a central security viewing area are under way, Waters said.

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STS-29 window nears

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the external tank (ET) and solid rocket boosters (SRB) scheduled for Wednesday.

Magellan, the primary payload for STS-30, was transferred to the payload vertical processing facility Wednesday and prepared for mating with its IUS yesterday.

For STS-30 to meet the front end of its 30-day launch window beginning April 28, STS-29 must be launched by March 18 to allow for turnaround of the launch pad for the Magellan planetary probe.

Donations sought for fire victim's family

A JSC custodial employee, Benjie Hunter of Diversified Management Services (DMS), died Wednesday morning at Shriners Burn Institute in Galveston from injuries received Sunday from an early morning fire at her home in LaMarque.

Hunter had worked in Bldgs. 260

and 232. Her family's home and all their possessions, including their car, were destroyed in the blaze.

Donations of money, furniture and clothing for the family are being accepted by Denise Silveira, DMS, x39564, Bldg. 232. Donations may be mailed to: DMS, Box 58586, Houston, TX, 77258.