



Space News Roundup

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No.7

New facilities provide 'epochal new capability'

Center officials dedicate Space Station Control Center, Training Facility

JSC officially dedicated the new Space Station Control Center and Space Station Training Facility on Thursday, ringing in what JSC Director Aaron Cohen called "an epochal new capability."

Dignitaries and employees alike had a chance to tour the new 102,000-square-foot SSCC in Bldg. 30 South, adjacent to the Mission Control Center, and the 30,000-square-foot STF, in Bldg. 5 next to the Space Shuttle Mission Training Facility.

"I think all of us in this business have a sense of great things to come from the work that will be carried out in this new facility," Cohen said.

"Because it is here that our efforts will begin to focus on harnessing the properties of space and using them for the betterment of all peoples of the Earth. As students of science and engineering and technology, it is our belief that Space Station Freedom, which will give us a permanent presence on what John Kennedy called 'the new ocean of space' represents an epochal new capability for our space exploration program."

Mission Operations Director Eugene Kranz harkened back 30 years to the anniversary of

John Glenn's first American orbital flight, noting that the control rooms of the manned space flight program from Mercury to the shuttle have been classrooms of the first order.

"From this site, as of today, we will begin to write a new chapter that will involve, beginning just 45 months from now, the construction of an international orbiting research laboratory," Kranz said. "It is a dream which goes back at least 100 years in our American culture, and a prospect that we in the space flight business have long anticipated. Our operations aboard

Space Station *Freedom* will teach us the necessary skills and enrich our knowledge base for all of the adventures of exploration and discovery that will follow.

"Indeed, I am reminded today of Winston Churchill's pledge to America early in 1941: 'Give us the tools,' he said, 'and we will finish the job.' For the last eight years, that is what we at NASA have asked of you, the taxpayers, and of you, the nation's administrative and Congressional leadership. And you delivered. Now it's our turn," Kranz said.

The SSCC will become only the third major

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Ulysses may rewrite Jupiter textbooks

Ulysses discovered an unexpectedly large Jovian magnetic field during its Saturday slingshot around the gas giant, and noticed that volcanic eruptions on the moon Io have abated.

"Some of the textbooks will have to be rewritten," said Peter Wenzel, lead project scientist for the European Space Agency, working jointly with NASA on the solar polar probe.

Sixteen months and 617 million miles after deployment from the Space Shuttle *Discovery*, Ulysses came within 280,000 miles of Jupiter's core using its gravity to swing out of the ecliptic plane and on toward the poles of the Sun, a region never explored by spacecraft.

The unprecedented maneuver gave scientists an opportunity to investigate the region of space dominated by Jupiter's magnetic field, called the magnetosphere. Experiments examined the interaction of the magnetosphere with the solar wind, a stream of high-energy particles emanating from the Sun, and study various phenomena within this magnetic bubble.

What they found was a magnetic field almost twice as large and less organized than when the two Voyager spacecraft flew by in 1979, but about the same size as when the two Pioneer spacecraft flew by in 1973 and 1974.

Ulysses' instruments also took the first detailed readings on Jupiter's "plasma torus," a tire-shaped tube of electrically charged gases that encircles the planet and is fed by volcanic plumes from Io. Readings showed the torus is made up of ionized atoms of sulfur and oxygen at temperatures of as much as 10 million degrees Celsius and whirling around

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NASA
National Aeronautics and Space Administration
Washington, D.C. 20546
Office of the Administrator

February 10, 1992

The President
The White House
Washington, DC 20500

Dear Mr. President:

It is with the deepest regret that I submit this letter of resignation as the Administrator of NASA. As we discussed when we met today, and because NASA is without a Deputy, I will remain until April 1.

This action will conclude almost 37 years of continuous military and government service for me. I have been unbelievably privileged to have had so many challenging assignments in aviation, space flight, military command and public administration over these years. In our nation's space business, I have enjoyed jobs in every corner of it: civilian and military, highly classified and open, flight and management.

In the last six years since I arrived to join the NASA leadership just after the Challenger tragedy, I have watched the talented men and women of this elite agency turn heartbreak and disarray into the impressive achievements and superb organization of today. With 20 safe and successful Shuttle flights in the last 40 months, scientific discoveries pouring in, Space Station Freedom on track, and our wind tunnels testing the airframes and spacecraft of tomorrow, they deserve to be very, very proud. With your support, their opportunities to inspire America's people and drive our country's competitiveness are boundless. Their achievements result from working daily in a fishbowl world of difficult and exacting tasks, tough judgements and carefully balanced risks; not an endeavor which some would have you think has quick, brilliant and easy solutions.

I think that the job of leading these people is the best one in Washington, and I am proud to have had that privilege. Cody and I particularly want to thank you and Barbara for the personal times you have shared with us over the years.

Sincerely,

Richard H. Truly
Administrator
Vice Admiral, U.S. Navy (Ret.)

Truly will resign as of April 1

NASA Administrator Richard H. Truly announced Wednesday he is resigning as the head of the agency as of April 1.

Truly's Feb. 10 letter to President George Bush marked the unexpected end of his three-year stint as the head of the world's largest space agency. A successor was not immediately named.

"Anytime the leadership changes in an organization it can be a time of rough seas and turbulent times and in the Navy whenever you enter tough situations and rough seas there's a saying called 'steady as she goes,' Truly told NASA employees in a televised message Thursday.

"I think all the ingredients are in place for you to be comfortable during the days I have remaining as the NASA administrator. I am going to hold you to the same high standards that I have held you to in past years. Steady as she goes is the word."

Truly assured employees that until he leaves in April he will be "going full-force supporting the space program to the Congress and to the people." He said he is not sure what will happen April 2, but that Bush supports the space program and he is certain that the President's nominees for administrator and deputy administrator will be outstanding choices.

The first astronaut to lead NASA, Truly was nominated by Bush in April 1989. At the time, he had been associate administrator for space flight in charge of the recovery from the Challenger accident since February 1986. While associate administrator, he spearheaded the rebuilding of the space shuttle program and saw the return to flight with the September 1988 launch of *Discovery* on STS-26.

A member of the astronaut class of 1969, Truly made his first space flight in November 1981 as the pilot of STS-2. He was commander of STS-8, the first night launch of a space shuttle.



Truly

Astronauts' flights make 'top ten' of 1991 records

By Kari Fluegel

STS-43 and Astronaut Hoot Gibson went into the record books in 1991 with feats now included in the National Aeronautic Association's "Ten Most Memorable Record Flights of 1991."

NAA had the responsibility for overseeing and certifying more than 100 record flights last year. Ten flights, however, set records that specifically stood out to the Contest and Records Board. NASA was represented twice in the list.

Gibson earned a spot in the top ten with his horizontal flight altitude record set Jan. 31, 1991, in his modified Cassutt Racer. Gibson climbed over the Gulf of Mexico for

more almost 90 minutes before reaching 27,040 feet where he flew for more than 90 seconds setting the record.

STS-43 also set a record when it blasted off from the Kennedy Space Center Aug. 2, 1991. During that launch, the Space Shuttle *Atlantis*, carrying a Tracking and Data Relay satellite in the cargo bay, lofted a record 253,465 pounds — more than 126 tons — into orbit. Crew members on the record setting flight were Commander John Blaha, Pilot Mike Baker and Mission Specialists G. David Low, Shannon Lucid and James Adamson.

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JSC Photo by Benny Benavides

POINTERS ON PRINTING — Alice Ward, manager of the Bldg. 227 print shop for Hernandez Engineering Inc., explains how the Printing Management Branch deals with mission documentation to several visitors during last week's open house.

Gilruth earns lifetime achievement award

Former JSC Director Robert Gilruth last night was the first recipient of a special lifetime achievement award presented by the Rotary National Award for Space Achievement Foundation.

The foundation also presented the 1992 Space Trophy to Norman R. Augustine, chairman and CEO of Martin Marietta Corp., during its annual awards banquet.

The lifetime achievement award presented to Gilruth has been named The Corona and honors exceptional achievement in the exploration of space.

"Recognizing only the nation's brightest space explorers, the award takes its name from the

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JSC

Ticket Window

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

EAA Houston Livestock Show & Rodeo (Feb. 16-March 1, AstroDome): \$9.
EAA Bus Trip to Rodeo-Clint Black (1:30 p.m. Feb. 22): \$17.
EAA Corpus Christi Dog Race Bus Trip, (Feb. 22-23, includes accommodations, breakfast, admission to Texas State Aquarium, Greyhound Track, Aransas Wildlife Refuge and Fulton Mansion): \$70 per person.
Movie discounts: General Cinema, \$4; AMC Theater, \$3.75; Loews Theater, \$4.
Metro bus tickets and passes: 7 percent off.
The following discount tickets will be available soon:
EAA Walt Disney's Ducktales, March 24-29.
EAA JSC Picnic, May 2.

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Gilruth Center News

Sign up policy — All classes and athletic activities are first come, first served. Sign up in person at the Gilruth Center and show a badge or EAA membership card. Classes tend to fill up four weeks in advance. For more information, call x30304.

EAA badges — Dependents and spouses may apply for photo identification badges from 6:30-9 p.m. Monday through Friday. Dependents must be between 16 and 23 years old.

Weight Safety — Required course for employees wishing to use the Gilruth weight room. The next class will be from 8-9:30 p.m. Feb. 20, March 18 and March 31. Cost is \$5.

Defensive driving — Course is offered from 8 a.m.-5 p.m. March 21 and April 10. Cost is \$19.

Aerobic dance — High/low-impact classes meet from 5:15-6:15 p.m. Tuesdays and Thursdays. Cost is \$32.

Exercise — Low-impact class meets from 5:15-6:15 p.m. Mondays and Wednesdays. Cost is \$24.

Ballroom dance — Eight weeks of professional instruction in beginning, intermediate and advanced ballroom dancing. Beginning and advanced classes meet from 7-8:15 p.m. Thursdays beginning March 5. Intermediate class meets from 8:15-9:30 p.m. Thursdays. Cost is \$60 per couple.

Country and western dance — Six weeks of instruction in beginning and intermediate country and western dancing. Beginning class meets from 7-8:30 p.m. Mondays beginning March 2. Intermediate class meets from 8:30-10 p.m. Mondays. Cost is \$20 per couple.

Aikido — Martial arts class meets Tuesdays and Fridays. Cost is \$35 per month.

Fitness program — Health Related Fitness Program includes medical examination screening, 12-week individually prescribed exercise program. Call Larry Wier, x30301.

Golf — The JSC Golf Association is accepting members for the 1992 season. League fee is \$55. Maximum handicap is 36. First tournament is Feb. 22. Call Gary Morgan, x33740.

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Dates & Data

Today

Black history — The 1992 JSC Black History Committee will present part two of "Education 2000" at 11:30 p.m. Feb. 14 in the Gilruth Center. The Rev. Kirbyjon Caldwell of Windsor Village United Methodist Church, and the Rev. Robert Harper of Highland Heights Church of Christ, will speak.

Abstracts due — The University of Houston-Clear Lake, the Institute of Electrical and Electronics Engineers and the Instrument Society of American are seeking papers for their JAIPCC (Joint Applications in Instrumentation, Process and Computer Control) '92 Symposium. The theme of the March 19 symposium is "Technologies for New Exploration." Abstracts of 250 words or less are due by Feb. 14 to James Villarreal, Software Technology Branch, PT4, Houston. For more information, call James Villarreal, x38076 or Yashvant Jani, 480-8906.

Cafeteria menu — Special: tuna and salmon Croquette. Entrees: pork chop with yam rosette, Creole baked cod. Soup: seafood gumbo. Vegetables: Brussels sprouts, green beans, buttered corn, whipped potatoes.

Monday

Presidents Day — Most JSC offices will be closed Feb. 17 in observance of the Presidents Day holiday.

Tuesday

Picnic committee meets — The 1992 JSC Picnic Committee will meet at 4:30 p.m. Feb. 18 at the Gilruth Center. For more informa-

tion, call Ginger Gibson, x30596.

Cafeteria menu — Special: stuffed cabbage. Entrees: turkey and dressing, round steak with hash browns. Soup: beef and barley. Vegetables: corn coblette, okra and tomatoes, French beans.

Wednesday

Cafeteria menu — Special: pepper steak. Entrees: catfish with hush puppies, roast pork with dressing. Soup: seafood gumbo. Vegetables: broccoli, macaroni and cheese, stewed tomatoes.

Thursday

NASACOM group meets — NASACOM, a Commodore computer users group, will meet at 7:30 p.m. Feb. 20 at the Clear Lake Park Bldg., 5001 NASA Road 1. For more information, call Glenda at x31764.

Cafeteria menu — Special: chicken fried steak. Entrees: beef tacos, barbecue ham steak, Hungarian goulash. Soup: turkey and vegetable. Vegetables: spinach, pinto beans, beets.

Feb. 21

Black history — The 1992 JSC Black History Committee will present the Ensemble Theatre production of the off-Broadway play "Do Lord Remember Me: at 11:30 a.m. in Teague Auditorium.

HSS meets — The Houston Space Society will meet at 7:30 p.m. Feb. 21 in Rice University's Space Sciences Bldg., Rm. 106. Dr. David Talent, principal scientist for Lockheed Engineering Services, will discuss "Garbage in Orbit." For more information, call Clifford

Carley, 923-7221.

Cafeteria menu — Special: tuna and noodle casserole. Entrees: liver and onions, deviled crabs, roast beef with dressing. Soup: seafood gumbo. Vegetables: whipped potatoes, peas, cauliflower.

Feb. 22

Lunar New Year — The NASA/JSC Asian Pacific American Program will host a Lunar New Year celebration at 6 p.m. Feb. 22 at the Gilruth Center. The festivities will include a social hour, dinner and dancing. Entertainment will be provided by White Shadow, playing mixed popular music. Tickets are \$12 per person and must be purchased by Feb. 17 from an APAP council member. For more information, call Thuy Mai at 282-3574.

Feb. 26

NMA meets — The JSC chapter of the National Management Association will meet at 5 p.m. Feb. 26 in the Gilruth Center. Debbi Brown, project manager for Space Center Houston, will speak. Reservations are due by noon Feb. 19. For more information, call Valerie Burnham at x34210.

Feb. 27

AIAA dinner — The American Institute of Aeronautics and Astronautics will host the Houston Section 30th Anniversary Dinner at 5 p.m. Feb. 27 in the Gilruth Center ballroom. Cost is \$15 for members and spouses, \$18 for non members and \$12 for students and young members. For more information, call 333-6064, 283-4214, 283-6000 or 282-3160.

Swap Shop

Property

Sale: Friendswood, 2 lots, 0.95 acre, all util, \$30K/\$37K or \$55K/both. Ron, 996-9724.

Lease: Webster/Ellington condo, 2 BR, \$475/mo. Dave, x38165 or Eric, x38420.

Rent: Oakbrook West, 3-2-2D, pool, garage dr opener, fans, no pets, \$1000/mo plus dep. 480-3260.

Lease: Tranquility Lake condo, 1 BR, 700 sq ft, microwave, W/D, fans, FPL, boat ramp. 332-3798.

Rent: League City, Pecan Forest, 3-2-2, FPL, fenced, no pets, \$795/mo. 554-6200.

Rent: Friendswood area, enclosed RV storage stall, 40' deep, lights, pwr. 482-9396.

Sale: Shoreacres, 2 lots, \$3.2K/ea or reduced for both. Frank, x34185 or 471-2934.

Sale/Lease: Egret Bay Villa condo, 1-1-2CP, W/D, FPL, boat ramp, pool, assum, low equity, \$39.9K or \$475/mo. 773-7982 or 335-1336.

Sale: Santa Fe, 2.5 acres, well, septic, fenced, \$21.9K, no owner financing. 534-2231.

Sale: Waterfront beach house, 3-2-3, on pilings, 862-3929.

Sale: Countryside, 3-2.5-2A, two story, corner lot, cov deck, int util room, \$66.9K. 554-7623.

Sale: Fairmont Park, brick duplex, 2568 sq ft, 2-1.5-2/ea unit, util rm, C/AH, elec appli, fenced, \$92.5K. 474-5610.

Sale/Lease: Egret Bay Villa, 1 BR, FPL, fans, W/D, free boat w/purchase, \$43K or \$600/mo. Sean, 283-9323 or 996-7693.

Cars & Trucks

'88 Nissan minivan, AM/FM/cass, rear A/C, cruise, 47K mi, ex cond, \$7.4K. x30608 or 487-9510.

'88 Chevy Silverado, loaded, AM/FM/cass, new tires, bedliner, tinted windows, custom int/ext, low mi, \$9K. Stephanie, 333-7221 or 489-7286.

'85 Pontiac 6000, 67K mi, ex cond, \$3K. Butch, x39081 or 488-2767.

'87 Honda CRX hatchback, 5 spd, A/C, AM/FM/cass, 38K mi, good cond, \$5.8K. 335-8539 or 992-5958.

'88 Cavalier Z24, blk, V6, loaded, ex cond, \$5450. Paul, x30381 or 996-8326.

'87 BMW 325es, wht, tan leather int, tint, security, ex cond, 66K mi, \$10K. x35399 or 486-4961.

'86 Pontiac 6000, V6, auto, A/C, stereo cass, sun roof, ex mech cond, \$2.8K OBO. Brian, 283-4079 or 488-0756.

'80 Cutlass LS, 4 dr, blk w/gold roof, 95K mi, good cond, \$950. John, x39130 or 332-4851.

'85 Buick Century, 4 dr, 4 cyl, light gray, ex cond, 98K mi, \$2.1K. Maceli, 283-1157 or 286-4522.

'80 Pontiac, 4 dr liftback, A/C, V6, auto, AM/FM/stereo, good cond, \$1350; '84 Nissan 300ZX, 2+2, auto, A/C, stereo cass, \$4350. 481-3637.

'84 Ford F150 XLT Lariat PU, loaded, ex cond, 64K mi. 992-1338.

tires, ex cond. 282-6883 or 943-1694.

'84 Monte Carlo, V8, loaded, good cond, \$3K OBO. Bruce, 485-5970.

'85 VW Golf, stereo, A/C, sunroof, 75K mi; '85 Ford Escort, stereo, sunroof, A/C, 70K mi, ex cond, \$2.1K. Mike, 283-5890 or 868-5132.

'87 Suzuki Samurai JX 4x4, 5 spd, A/C, wht, ex cond, \$4K. 333-6509.

'78 Porsche 928, brwn, leather int, auto, 75K mi, \$8.9K, ex cond. Bill, x39980.

'86 Cougar LS, 3.8 liter, V6, auto, red/red, all pwr, AM/FM/cass, tilt, cruise, new tires, low mi. 787-9232.

'85 Ford LTD Crown Victoria, 4 dr, auto, P/S, A/C, cruise, beige, 100K mi, \$2190. Ricardo, 480-4515.

'89 Mazda 626 LX, loaded, 26K mi, ex cond, \$10.5K. Brad, x37653 or 488-4989.

'88 Lincoln Town Car, champagne color, 70K mi, ex cond, \$7850. 482-5469.

'84 Nissan PU w/camper, 68K mi, carpeted camper w/storage, good cond, \$2.3K. Steve, x34593 or 996-5191.

'83 Nissan Sentra, rebuilt clutch, needs timing belt, about 110K mi, body in good cond, BO. Rodney, x38889.

'91 GMC Sonoma PU, 1/2 ton, A/C, blk, 5 spd, long bed, \$9.8K or take over payment. Leonard, 283-4813 or 946-2975.

'53 Chevy PU. 534-6750.

'78 Porsche 928, brwn w/leather int, auto, 75K mi, ex cond, \$8.9K. Bill, x39980.

'85 Fiero, 4 cyl, 5 spd, P/W, tinted, AM/FM/stereo, low mi, garaged, silver gray, new batt and tires. \$3K. 333-4600.

'76 Cadillac Coupe de Ville, 500cc, silver, leather int, 65K mi, \$1.5K OBO. (409) 938-4793.

'85 Chevy Cavalier, 4 dr, 4 cyl 2.0L, auto, 75K mi, new tires and brakes, ex cond, \$2.4K. 488-5522.

Boats & Planes

'86 Bass Buggy pontoon, 20', trlr, 35hp Mercury, less than 70 hrs, elec start, Hummingbird LCR-2000 depth recorder, 2-6 gal tanks, new batt, \$5K OBO. 282-4231 or 992-3351.

'89 E-Z Loader trlr for 20' boat, single axle w/brakes, low mi, \$1K OBO. 532-4628.

Galilee 15' sailboat, 6' 8" beam w/2.5hp, O/B, Holsclaw trlr, \$1.5K. 334-4732.

'78 Bayliner, w/115 Johnson O/B SS prop, easy loaded trlr, new tune up, \$2.5K. x32853 or (409) 925-3183.

'85 British Seagull long shaft sailboat motor, 7.5hp for sailboats up to 26', new aux fuel tank, solid state submersible ignition sys, \$550. 333-4600.

'75 Oachita16' fiberglass bass boat w/85hp Johnson, Holsclaw tilt trlr, depth finder, ex cond, \$1650. x34784 or 482-5120.

'76 U.S. Yacht Corp 22' sailboat, w/'84 Evinrude 7.5hp, 5 sails, swing keel, new upholstery, 9' beam, Portipotti, pop-top camper, sink, sleeps 6, \$2.5K OBO, will consider trade for motorcycle or cash, owner finance. 339-1136.

Cycles

'84 Honda Interceptor 500, ex cond, \$1.6K; '88 Yamaha YZ 125, ex cond, \$1.2K. Andy, 333-6671 or 332-9105.

Audiovisual & Computers

IBM PC/XT, 640 K, 10MB, HD, mono display, \$300 OBO. 333-7668 or 488-0345.

Star Micronics daisy wheel prtr, wide carriage w/dust cover and manual, 16 assorted daisy wheels, ex cond, was \$450, now \$89. Ben, 335-2141.

Lanier letter quality prtr w/noise reducing cover, incl word processor that needs repair, SW, \$100 OBO. 326-4282.

Atari computer 800 XL, new, \$50 OBO. 486-8266.

Microsoft Flight Simulator v1.02, orig program disk and manual, runs on Mac Plus and Mac SE, \$15. 488-5522.

Software for Windows 3.0, MS Word 1.1, \$75; Micrografix Draw Plus 1.1, \$25; PCTrac ballistic trackball, \$25; Dvorak-layout XT kybd, \$25. Gary, 282-6520 or 480-9200.

Commodore 128 w/fan, moni, DD, modem, SW, \$100. Cliff Watts, x35477 or 534-4145.

EGA moni, \$120. x37629.

"Bodyworks" SW reference tool for medical student/families, uses 2.5 MB HD, \$42. 474-2654.

Tandy 1000, 384K RAM, two 360K FD, mono moni, \$175; Tandy wide carriage daisy wheel prtr, \$100. 992-5958.

Musical Instruments

Yamaha DX-11 MIDI kybd and hard case, new, \$500 OBO. 333-7668 or 488-0345.

Pets/Livestock

American fuzzy lops and mini lops rabbits, \$25/up. Gailo, 554-6200.

AKC Siberian husky puppies, 2 males, 4 females, blk/wht, 6 wks old, \$200/ea. 991-5280.

AKC Chihuahua puppies, chocolate/fawn, blue gray, 8 weeks old, shots, \$200/ea. 534-3893.

Free blk short hair dog, female, 6 mo old, shots, wormed. 485-7264.

AKC cocker, blonde red, 10 mo old, \$150. x35896 or 488-7982.

Free cocker spaniel, tri-colored male, shots. 471-4843.

AKC Pomeranian avail for stud service, orange-sable, will take pick of liter or a fee. Katie, x33185.

Free cocker spaniel/border collie puppies, 6 wks old. Bob, x36848.

Purebred Baum, male, healthy and neutered/not paper trained, w/Kiki-style leash, \$15. Joe, x31868.

Household

Whirlpool pwr clean portable dishwasher, ex cond, \$150. 475-0975.

Lazy Boy recliner, new, \$250. Cliff Watts, x35477 or 534-4145.

Lane rocker recliner, tan, good cond w/few spots, \$100 OBO. 534-2231.

Zenith 25" color console TV, 2 yrs old, ex cond, \$250. Teresa, 244-5212 or John, 280-2133.

King sz mattress, box springs, frame, \$100 OBO; end table, \$50; coffee table, \$25. 332-2229.

Plaid sleeper sofa, blue/rust, ex cond, \$400. 538-4630.

Almond Magic Chef elec cooktop, 30" x 21", ex cond; almond 36" vent hood, fair cond, both free. George, x38959 or 486-6944.

Oriental lacquer hand painted furniture, blk, buffet/bar, \$700; curio cab, \$225; sofa table,

\$195; 4 pictures, \$195. 333-7180 or 333-9581.

Super single waterbed, 12 drwrs, heater, hdbd bookcase, linens, was \$400, now \$190. 434-1053.

Desk, 4 drawer dresser, coffee table, bed frame, all for \$75. Ray, x33954 or 487-4889.

Stratford sleeper/sofa, rust, good cond, \$100; 2 day beds, \$30/ea. Mike, x34710.

Queen sz matt/box springs and frame, \$40. 482-0661.

Six piece smoky blue glass top dining set, 8 yrs old. 481-1958.

Oak queen sz waterbed w/padded side rails, \$225. 476-4872.

Wicker lamp, \$10; dinette w/6 swivel chairs, \$60; 50's chair, \$40; cedar stereo cabinet, \$50; end table w/underneath storage, \$20; 4 videocassette cabinets, \$5/ea or all for \$15. 482-2138.

Wanted

Want individual in Alvin to care for 2 1/2 yr old, full time, Mon-Fri, 8-5 pm, prefer max of 4 children. Debbie, x33846.

Want Macintosh SE or II, must be inexpensive, can trade items. 339-1337.

Want riders for vanpool, from NW Houston to Nasa area. Wendell, x36182 or 466-3203.

Want female roommate to share 3 BR house, near water, in Southshore area, \$300/mo plus 1/2 elec and gas. 538-3320.

Want non-smoking female to share 2 BR condo in Webster, must love cats, \$300/mo plus 1/2 util. 286-7263.

Want non-smoking female to share house in League City, the Landing, pay 1/2 rent and util. 554-4944.

Want to trade 80 Yamaha 450 in perfect cond for mountain bike or windsurfer. Eric, 339-3278.

Want used elec dryer, will pay \$50. Lane, 333-6456 or 480-8682.

Want riders for vanpool from West Loop Park and Ride to NASA. Richard, x37557.

Want to buy/trade NASA and space related patches, pins, decals. Andrew, 280-0647.

Want above ground swimming pool with pump and filter. 339-1136.

Miscellaneous

General Electric wall A/C, 10K BTU, new, \$200. 334-4732.

Space Station Pilgrim Observer model kit w/nuclear pwr interplanetary spacecraft, made by MPC in 1970 Mib, \$15. 464-8694.

'79 Easy-Go golf cart, gas operated, 4 wheels, ex cond, \$650. 996-0913.

President/First Lady Gold Charter membership, \$550 OBO. Andy, 482-3078.

Ladies down-filled ski bibs and matching jacket, sz 10, cream w/brwn trim, ex cond, \$70 OBO. x35444 or 326-2754.

Three drwr student's desk, w/3 shelf hutch, \$50; Nordic exerciser, \$20; exercise bike, \$25. John, x39130 or 332-4851.

Yakima bike roof rack for car, incl gutters, new, was \$250, now, \$150. George, 326-2395.

English style baby carriage, \$15; economy style stroller, \$10. 474-2654.

Woodworking tools, chisels, clamps, worm gear saw. 538-3273.

One week timeshare condo rental avail anywhere in world, \$575. 286-8417.

SPACE SHUTTLE MANIFEST

'92 Mission: Date: Orbiter: Payload:	45 April Atlantis ATLAS-01 GAS (1) SSBUV-A-01	49 May Endeavour INTELSAT-VI-R ASEM	50 June Columbia USML-01	46 August Atlantis TSS-01, EURECA-1L IMAX-06 EOIM-III/TEMP2A-03 CONCAP2-01 CONCAP3-01 LDCE-01	47 September Endeavour SL-J GAS BRIDGE	52 September Columbia LAGEOS II USMP-01, CANEX-02 ASP	53 December Discovery DOD GCP
	Inclination: Altitude: Duration:	57° 160 8	28.4° 183 7	28.5° 160 13	28.5° 230 7	57° 163 7	28.5° 160 9
Crew CDR: PLT: MS:	Charles F. Bolden Brian Duffy PLC Kathryn D. Sullivan C. Michael Foale David C. Leestma	Daniel C. Brandenstein Kevin P. Chilton Thomas D. Akers Richard J. Hieb Bruce E. Melnick Kathryn C. Thornton Pierre J. Thuot	Richard N. Richards Kenneth D. Bowersox PLC Bonnie J. Dunbar Ellen S. Baker Carl J. Meade	Loren J. Shriver Andrew M. Allen PLC Jeffrey A. Hoffman Franklin R. Chang-Díaz Marsha S. Ivins Claude Nicollier	Robert L. Gibson Curtis L. Brown, Jr. PLC Mark C. Lee Jerome Apt N. Jan Davis Mae C. Jemison	James D. Wetherbee Michael A. Baker Tamara E. Jernigan William M. Shepherd Charles Lacy Veach	David M. Walker Robert D. Cabana Guion S. Bluford Michael R. U. Clifford James S. Voss
PS:	Dirk D. Frimout Byron K. Lichtenberg		Lawrence J. DeLucas Eugene H. Trinh	Franco Malerba	Mamoru Mohri	TBD (Canada)	

'93 Mission: Date: Orbiter: Payload:	54 January Endeavour TDRS-F DXS	55 March Columbia SL-D2	51 April Discovery ACTS ORFEUS-SPAS	56 May Endeavour ATLAS-02 SPTN-201-01 SSBUV-A-02	57 June Atlantis EURECA-1R SPACEHAB-01 GAS BRIDGE SHOOT	58 August Columbia SLS-02	59 September Endeavour SRL-01	60 November Discovery SPACEHAB-02 WSF-01 GAS BRIDGE CAPL-01	61 December Atlantis HST SM-01
	Inclination: Altitude: Duration:	28.5° 160 5	28.5° 160 9	28.5° 160 8	57° 160 9	28.5° 160 7	39° 159 13	57° 130 9	28.5° 160 7
Crew CDR: PLT: MS:	John H. Casper Donald R. McMonagle Gregory J. Harbaugh Susan J. Helms Mario Runco, Jr.	TBD TBD PLC Jerry L. Ross TBD Bernard A. Harris, Jr.	5	5	6	TBD TBD PLC Rhea Seddon Shannon Lucid David Wolf	7	TBD TBD PLC Linda M. Godwin TBD TBD TBD	7
PS:		TBD (Germany) TBD (Germany)				TBD TBD			

'94 Mission: Date: Orbiter: Payload:	62 January Columbia USMP-02 DEE OAST-02	63 March Discovery LITE 1 SPTN-204 ROMPS-01 PL OPPTY	64 May Atlantis SPACEHAB-03 GAS BRIDGE SPAS-III, IEH-01 RTEAM	65 June Endeavour CRISTA-SPAS ATLAS-03 SSBUV-A-03	66 July Columbia IML-02	67 September Discovery ASTRO-02 SPTN-201-02 CMSE-01
	Inclination: Altitude: Duration: Crew:	28.5° 160 9 5	28.5° 160 7 5	28.5° 160 6 7	28.5° 160 9 7	28.5° 160 13 7

Fiscal Year '95			
1st QTR	2nd QTR	3rd QTR	4th QTR
SFU-RETR	SPACEHAB-04	SL-D3	TDRS-G
TPITS	EURECA-2L WSF-02	USML-02	CMSE-02
CAPL-02	IEH-02		ATLAS-04
SRL-02	LITE II-01, USMP-03 SPTN-201-03, FLOATZONE -01 OAST-FLYER		WISP SSBUV-A-04

Fiscal Year '96			
1st QTR	2nd QTR	3rd QTR	4th QTR
SPACEHAB-05	SSF/MB-02	SRL-03	SPACEHAB-06
WSF-03	SLS-03	SSF/MB-03	WSF-04, CMSE-03
EURECA-2R			ISEM-02
ISEM-01			MICROWAVE-01
SSF/MB-01(FEL)			SSF/MB-04

Fiscal Year '97			
1st QTR	2nd QTR	3rd QTR	4th QTR
SSF/MB-05	SPACEHAB-07	SSF/MB-07	ATLAS-05
SSF/MB-06(MTC)	USMP-04	SSF/UF-01	CONE
	IEH-03		SSBUV-A-05
	DEBRIS		SSF/MB-08
	OAST-03		SSF/UF-02
	HST SM-02		

Glossary

ACTS Advanced Communications Technology Satellite ASEM Assembly of Station by EVA Methods ASP Attitude Sensor Package ASTRO Ultra-Violet Astronomy Telescope ATLAS Atmospheric Laboratory for Applications and Science CANEX Canadian Experiment CAPL Capillary Pump Loop Experiment CMSE Candidate Materials Space Exposure CONCAP Consortium for Materials Development in Space CONE Cryogenic Orbital Nitrogen Experiment CRISTA Cryogenic Infrared Spectrometer Telescope for Atmosphere DEBRIS Orbital Debris Sensor DEE Dexterous End Effector DOD Department of Defense DXS Diffuse X-Ray Spectrometer EOIM Evaluation of Oxygen Interaction with Materials EURECA European Retrieval Carrier FLOATZONE Office of Commercial Programs Experiment	GAS Getaway Special GAS BRIDGE Payload Bay Structure for Up to 12 GAS Cans GCP Shuttle Glow and Cryogenic Heat Pipe HST SM Hubble Space Telescope Servicing Mission IEH International Extreme-UV Far-UV Hitchhiker IMAX Large format motion picture camera IML International Microgravity Laboratory INTELSTAT International Telecommunications Satellite Organization ISEM ITA Standardized Experiment LAGEOS Laser Geodynamics Satellite LDCE Limited Duration Candidate Exposure LITE Lidar In-Space Technology Experiment MICROWAVE Office of Commercial Programs Experiment OAST Office of Aeronautics and Space Technology ORFEUS Orbiting and Retrievable Far and Extreme Ultraviolet Spectrometer ROMPS Robotic Materials Processing System RTEAM Real Time Environmental and Agricultural Monitoring SL Spacelab	SFU Space Flyer Unit SHOOT Super Fluid Helium On Orbit SLS Spacelab Life Sciences SPACEHAB Commercial middeck augmentation module SPAS Shuttle Pallet Satellite SPTN Shuttle Pointed Autonomous Research Tool for Astronomy SRL Space Radar Laboratory SSBUV Shuttle Solar Backscatter Ultraviolet Instrument SSF/MB Space Station Freedom Manned Base SSF/UF Space Station Freedom Utilization Flight TEMP Two Phase Mounting Plate Experiment TDRS Tracking Data Relay Satellite TPITS Two Phase Integrated Thermal System TSS Tethered Satellite System USML U.S. Microgravity Laboratory USMP United States Microgravity Payload WISP Waves in Space Plasma WSF Wake Shield Facility
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Molina hangs STS-42 plaque

Dan Molina, the lead electrical, environmental and consumables systems engineer for STS-42, earned the honor of hanging the plaque in Mission Control following the recent flight.

"The whole team did an awesome job," said Molina, who represented the entire EECOM team. Molina was assisted by Matt Barry, who represented the propulsion systems team.

Lead Flight Director Bob Castle said the EECOM and PROP teams were honored for their success in managing and water consumption and thermal concerns. "It was a real challenge because the orbiter was in continuous sunlight for four days," he said.

Snapp, Huffstetler get information assignments

E. Lee Snapp has been appointed JSC computer security manager and Elena Huffstetler has been designated the alternate JSC representative to the NASA

Information Systems Committee.

Snapp previously was the computer security coordinator for the center, a position that will not be filled at this time.

Snapp taking over the position previously held by Don Simanton, and Huffstetler if filling a position previously held by John E. Cools.

Mercury engineering pioneer dies in Houston

Andre Meyer, one of the original members of the Space Task Group and one of the nine Mercury spacecraft inventors, died Jan. 30 in Houston of Parkinson's Disease.

Meyer, 70, worked at JSC from 1961 to 1973 after spending 15 years at Lewis Research Center. His work on the escape rocket and tower, and the ablative heat shield that protected Mercury, Gemini and Apollo capsules on reentry were key contributions to America's efforts to put man in space.

In 1963, he was honored by NASA as one



Molina

Snapp

Huffstetler

Meyer

Fortenberry

of the "Mercury Spacecraft Inventors" along with Maxime Faget, William Bland, Alan B. Kehlet, Willard Blanchard, Robert Chilton, Jerome Hammack, Caldwell Johnson and Jack Heberlig.

In 1966, he received U.S. Patent No. 3,270,503 for an improved method of laminating fiber and resin ablative structures.

A memorial has been established with the Houston Area Parkinson's Society.

Fortenberry top secretary

Lindy S. Fortenberry, secretary to the deputy manager of Space Shuttle Engineering

Integration, recently received the Marilyn J. Bocking Award for Secretarial Excellence.

Fortenberry has developed excellent working relationships with people in other offices at JSC, which has established a rapport that encourages an efficient team operation.

She was cited specifically for her work on charts and forms to support the Assured Shuttle Availability Program and Headquarters studies, as well as for volunteering to provide editorial and clerical support for the Space Shuttle Engineering Integration total Quality Management Q+ newsletter.

PSI offering office review classes now

The Clear Lake/NASA Chapter of Professional Secretaries International is offering Certified Professional Secretary review classes beginning this month.

The classes in accounting and administration will be provided free to candidates sitting for the CPS examination in May.

Accounting classes began Feb. 10 and will continue through March 19 every Monday and Thursday. Classes in office administration will begin March 23 and continue through April 16.

All classes will be held at McDonnell Douglas, 16055 Space Center Blvd. For more information and registration, call Karen Byrd at 333-2330.

Logistics engineers eye shuttle changes

The Houston Chapter of the Society of Logistics Engineers will present a discussion of the reorganization of the Space Shuttle Program Office on Thursday.

Lee Graham, a logistics management specialist in the shuttle program office, will speak at the 5:30 p.m. meeting at South Shore Harbour Country Club in League City.

For reservations or more information, call Graham, x30913, or Dennis Wise, x33661.



JSC Photo by Andrew Patnesky
TOPPING IT OFF — Construction workers watch as the traditional tree is placed atop the structural steelwork on Bldg. 4 South. Progress on the framework for the six-story building had reached its highest point when the workmen celebrated their accomplishments so far. Construction of the new building by prime contractor Peper-Lawson Construction Inc., Houston, is expected to be complete by late October.

Rain delays Discovery ferry flight

Atlantis ready to be stacked for next flight

By James Hartsfield

Space shuttles have been on the move on both coasts during the past week, highlighted by *Atlantis'* move to the Vehicle Assembly Bldg. at KSC early Thursday to be linked to the solid rockets and fuel tank for next month's launch of STS-45.

Atlantis is scheduled to be in the VAB for about a week and move to Launch Pad 39A on Thursday. The launch of STS-45, carrying the Atmospheric Laboratory for Applications and Science (ATLAS), is currently aimed at March 23.

Columbia arrived at KSC atop the Boeing 747 Shuttle Carrier Aircraft late Sunday and now is in the No. 3 processing hangar, where it will be prepared for a June launch on the longest shuttle mission planned to date, 13 days. The ferry flight to KSC from Rockwell's Palmdale, Calif., facility took one day, with a brief refueling stop at Kelly Air Force Base in San

Antonio. A planned stopover at Ellington Field was canceled to take advantage of good weather for the flight to Florida.

On Monday, the SCA returned to

Edwards Air Force Base, Calif., to pick up *Discovery*, parked at Edwards since its STS-42 landing. However, heavy rain in Southern California delayed *Discovery's* trip back to KSC during the early part of the week. *Discovery* was scheduled to be hoisted atop the SCA by Wednesday to begin a two-day flight back to KSC by Thursday.

Meanwhile, preparation of *Endeavour* for its first space flight and a prior firing test has continued at KSC. *Endeavour* is now scheduled to move to the VAB to be attached to the solid rockets and fuel tank for STS-49, the Intelsat VI rescue mission, late this month. A flight readiness firing, a 20-second firing of the main engines, is planned for late March at Launch Pad 39B.



New Space Station Control Center, Training Facility dedicated

(Continued from Page 1)

command and control center in the history of U.S. manned space flight, and will be the focal point for the coordination of mission operations aboard Space Station *Freedom* and among future control centers around the world. It will serve as the primary link between all ground-based systems and the orbiting manned base. The MCC will continue to direct shuttle operations, including space station assembly and utilization flights.

Key elements of the facility will be the Space Station Operations Control Room on the second floor; the Space Station Support Rooms surrounding the SSOCR on the first, second and

third floors; the Operations Support Room, the prime operations center for unmanned operations, on the second floor; and the Mission Operations Integration Room, the central point of information exchange and resource management between the SSCC and external elements such as the Space Station Training Facility, Engineering Support centers in the U.S., Canada, Europe and Japan, and the POIC at Marshall, on the first floor.

The SSCC will play a central role in all three phases of operations leading up to permanently manned Freedom operations. Construction was completed in December and integrated training will start in June 1995. Total

cost of facility and systems will be about \$417 million.

During manned assembly operations, which will involve about 17 shuttle flights over four years beginning in late 1995, the MCC will manage shuttle-based assembly operations while the SSCC manages station-based assembly as well as the activation and checkout of assembled systems. Mission planning will be shared by both SSCC and MCC teams.

Unmanned operations between shuttle visits will involve remaining activation and checkout of systems in preparation for permanent manning. During those periods, *Freedom* will depend on the SSCC for systems

command and control and some payload operations.

During manned utilization operations, *Freedom* will depend on the SSCC for command and control of systems while the MCC manages rendezvous and docking operations.

The SSCC will be continuously manned during all operations by certified Mission Control Teams.

The \$404.5 million SSTF will provide for training of increasing complexity as astronauts and mission controllers learn to operate and maintain single systems, then multiple systems and integrated air and ground systems in real flight conditions.

The heart of the training facility is

the Operations Support System on the ground floor, which consists of simulation host computers and subsystems that will allow the Operations Support Team to configure and operate the facility. Instructor Stations and a Simulation Control Area on the second floor will allow trainers to control simulated conditions as they test astronauts and controllers. The Station Network Simulator will provide integration between the SSTF and the SSCC, simulating the network between *Freedom* and the ground. Integration and Testing Environments on the third floor will provide for testing and verification of simulator hardware and software designs.

Ulysses, Hubble work together

(Continued from Page 1)

Jupiter at up to 3 million miles an hour.

Saturday's data showed only about half as much material in the torus as was seen by the Voyager probes and it was unevenly distributed, with thick and thin areas.

"The most obvious explanation is that Io is not nearly as active volcanically as it was," said Dr. Edward J. Smith, NASA project scientist for the joint mission.

Although the dive through the "completely filthy radiation environment" around Jupiter was risky and could have damaged Ulysses instruments, ESA Project Manager

Derek Eaton said everything was in "perfect working order" after the flyby.

At the same time that Ulysses made its flyby, the Hubble Space Telescope half a billion miles away made coordinated observations over four-days looking at auroras, one visual manifestation of the electrical fireworks. The joint observations combined ultraviolet images and spectra with information on particles and fields in an effort to gain a better understanding of what produces and maintains auroral activity.

Results from these observations will be analyzed in about a month.

Space News Roundup

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

Dates and Data submissions are due Wednesdays, eight working days before the desired date of publication.

Editor Kelly Humphries
Associate Editors Kari Fluegel

Rotary honors Gilruth achievements

(Continued from Page 1)

outer atmosphere of the Sun," according to the award announcement. "Often called the Sun's crown, the corona extends continuously into space, just as the influence of The Corona's recipient extends throughout the space community."

Gilruth began his career in 1936 in flight research, investigating handling qualities of airplanes, free-flight

experiments and transonic and supersonic speed flights. In 1958, he became director of the Space Task Group at Langley Field. In 1961, he became director of the new Manned Spacecraft Center in Houston.

In 1972, Gilruth was named NASA's director of key personnel development at Headquarters. He retired in 1973, but became a consultant to the administrator in 1974.

Astronauts make Top 10 flying records of year

(Continued from Page 1)

Other records making the Top 10 included 30 city-to-city records set on a single around-the-world flight, a women's hang gliding distance of

208 miles, longest flight by an ammonia gas filled balloon, fastest business jet from Paris to Houston and longest indoor flight by a rubber band-powered model airplane.