



STS-72 captures the Japanese Space Flyer Unit and deploys and retrieves the OAST Flyer. Photos on Page 3.



More JSC roads will be repaved in the coming months creating detours. Story on Page 4.

Space News Roundup

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No. 4

Station exterior finished, ready for stress tests

By Doug Ward

With a final weld on the module that will house astronauts aboard the International Space Station, more than 80,000 pounds of flight hardware have been manufactured and the exterior structures of the U.S. components are now complete.

"Our manufacturing is proceeding on schedule," said Wil Trafton, acting associate administrator for space flight. "This is what two years of stable funding and hard work will get you. Node 1 will be launched in December 1997 and we are right on track with our other modules. We'll be ready for the first U.S. launch."

McDonnell Douglas technicians are installing secondary structural subassemblies in both Node 1 and Node 2. This equipment includes braces to hold floors, equipment racks and parts of various station utility systems, life support, power, communication and other elements.

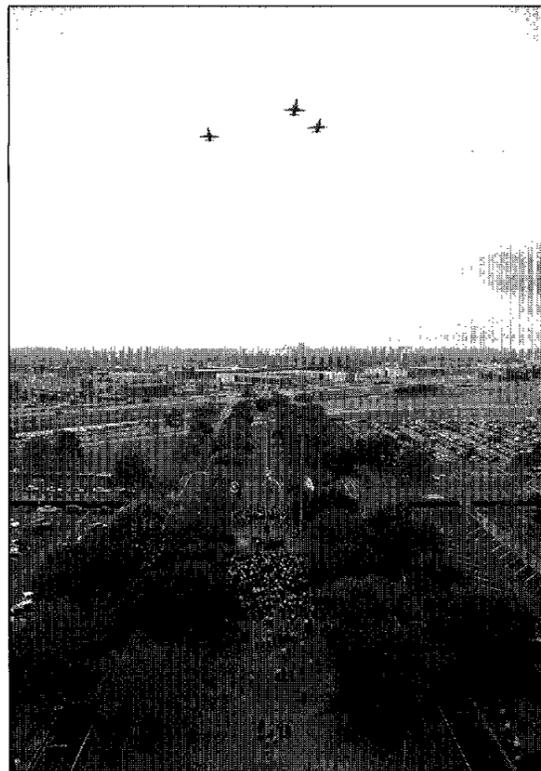
Boeing completed machining on Nodes 1 and 2 last year. The nodes also have all of their hatches and common berthing mechanisms in place. Node 2 (which serves as both the structural test article and a flight article) is almost ready to begin pressure and leak testing. To that end, technicians have attached approximately 900 strain gauges to measure stresses during a series of tests that begin later this month. Node 2 is scheduled for launch in 1999.

Node 1, which will be the first U.S.-manufactured module to fly, also has been welded and machined. It will undergo pressure tests after Node 2. In June, Node 1 will begin the process of final assembly and checkout. It will be launched in November 1997.

The U.S. lab module currently is being machined in a device called a horizontal boring mill. Technicians will begin installing mechanical systems in early February. The lab then will undergo its own pressure tests and be painted. The laboratory module will come back to a clean room for checkout before being shipped for its November 1998 launch.

The U.S. habitat module, where the astronauts will eat and sleep, will follow the lab module into the horizontal boring mill for machining, then

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IN REMEMBRANCE—Above: JSC Director George Abbey lays seven roses at the base of the flag pole in front of Bldg. 1 as astronaut John Young looks on. JSC employees gathered to remember the *Challenger* crew lost during ascent 10 years ago. Seven bells chimed over the emergency warning system and traffic stopped in honor of the seven astronauts of STS-51L. Left: NASA T-38s—led by astronaut Bob Cabana—fly over in the missing man formation during the ceremony. Later in the afternoon, Abbey, Young and the *Challenger* crew's families planted an oak tree for each member lost in a grassy knoll near Bldg. 110.

JSC Photos by Mark Sowa and Robert Markowitz

Station gets crew, Phase 1 flights grow

The first two crew members assigned to the International Space Station were announced this week as U.S. and Russia extended shuttle/Mir flights into 1998.

American Bill Shepherd and Russian Sergei Krikalev will be on the first team of crew members to occupy the International Space Station. A third crew member, who will live and work with Shepherd and Krikalev on the space station beginning in May 1998, will be named later. All will be launched to the station aboard a Soyuz rocket from the Baikonur launch site in Kazakhstan.

The selection of the two crew members and the additional flights to Mir were announced Tuesday by Vice President Al Gore and Russian Prime Minister Victor Chernomyrdin at the conclusion of their two-day meeting.

Expanding on the success of the shuttle/Mir program, NASA and the Russian Space Agency have agreed in principle to extend shuttle/Mir activities into 1998.

"The shuttle/Mir program is already paying back benefits," NASA Administrator Daniel S. Goldin said. "We are laying the foundation for construction of the International Space Station with these docking flights. Mir is proving to be an ideal test site for vital engineering research and expanding our knowledge of the effects of long-duration weightlessness."

NASA will add two missions to Mir, bringing the total number of planned shuttle-to-Mir docking missions to nine, while Russia will meet its commitment to deliver on schedule key elements used in the early assembly of the station.

STS-90, which had not been designated as a Mir mission, will now dock with the Russian station. The ninth mission, a new flight to Mir, has been added to the shuttle manifest. Both will occur in 1998.

Goldin said the two docking flights completed thus far have proven to be enormously beneficial. "We have simulated an early construction flight and conducted proximity and docking operations," he said.

Goldin added that the agreement enables the Russians to use the space shuttle to help them with a significant logistics shortfall. Goldin said NASA would study the extension of the Phase 1 program into 1999. Russia will meet its commitments, deliver the Functional Cargo Block for a November 1997 launch, and deliver the Service Module in 1998.

The details of these arrangements, including the technical and financial aspects, will be worked out in

Please see **SHUTTLE**, Page 4



Shepherd



Krikalev

Columbia rolls to pad

Crew rehearses for late February launch

By James Hartsfield

Columbia was rolled out to Kennedy Space Center's Launch Pad 39B Monday, on track for a launch as early as Feb. 22.

STS-75 Commander Andy Allen; Pilot Scott Horowitz; Mission Specialists Jeff Hoffman, Maurizio Cheli, Claude Nicollier and Franklin Chang-Diaz; and Payload Specialist Umberto Guidoni are at KSC today finishing up a count-down dress rehearsal. STS-75 will carry the Tethered Satellite System-1 Reflight and the United States Microgravity Payload-3 for a 14-day mission.

Work at the pad this week included a successful test run of the shuttle's three auxiliary power units, replacement of a high pressure fuel turbopump in one of *Columbia*'s main engines, and the installation of

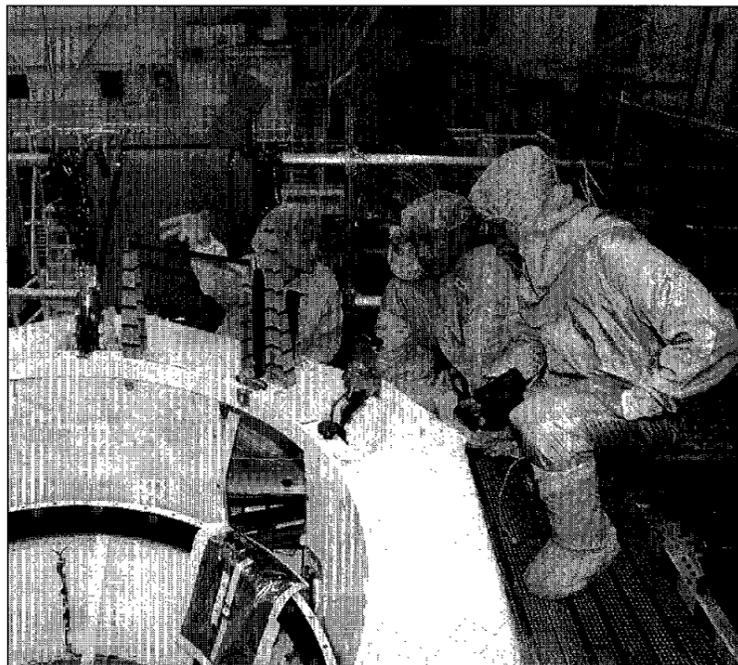
the TSS-1R and USMP payloads.

Shuttle managers plan to meet next Friday for a final review of mission preparations, following which a firm launch date will be announced.

In the Bay 1 shuttle processing hangar, *Atlantis* is being readied for STS-76, the third Mir docking mission planned for a mid-March launch.

This week, leak checks were performed on the orbiter docking system in *Atlantis*' cargo bay and the shuttle's inertial measurement units were tested. Members of the STS-76 crew will be at KSC on Thursday for an inspection of the orbiter's cargo bay during the crew equipment interface test.

Meanwhile, *Endeavour*, in the Bay 3 hangar at KSC since its January flight on STS-72, continues to undergo post-flight servicing.



NASA Photo

STS-75 Payload Commander Franklin Chang-Diaz, center, inspects the satellite retention element of the Tethered Satellite System in the Operation and Checkout Bldg. at Kennedy Space Center with JSC extravehicular activity specialists Cindy Thomas and Mike Hess.

JSC's Black History Month honors airmen

The Equal Opportunity Programs Office and the 1996 Black History Committee will present the JSC's Black History Month observance from 11 a.m. - 1 p.m. Feb. 12 at the Gilruth Center Ballroom.

The keynote speaker will be Herbert Carter, retired Air Force lieutenant colonel. Carter is a member of the Tuskegee Airmen, the original cadre of the 99th Fighter Squadron in World War II. During his military career, Carter flew 77 operational missions in five different types of fighter aircraft. His military decorations include the Air Medal with four clusters, Air Force Commendation Medal, Distinguished Unit Citation, European Theater Medal with five Bronze stars, National Defense Medal and the Air Force Longevity Medal. Today, Carter is president of the Tuskegee Alabama Chapter, Tuskegee Airmen Inc.

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JSC

Ticket Window

The following discount tickets are available for purchase in the Bldg. 11 Exchange Store from 10 a.m.-2 p.m. Monday-Thursday and 9 a.m.-3 p.m. Friday. For more information, call x35350 or x30990.

JSC Rodeo Lift-off Party: 4:30 p.m. Feb. 16 at the Gilruth Center featuring the Original River Road Boys. Tickets cost \$4.

Rodeo Carnival: Packages includes 28 ride tickets for \$10 and two for one food tickets.

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

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

Stamps: Book of 20, \$6.40.

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

Metro tickets: Passes, books and single tickets available.

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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 NASA badge or yellow EAA dependent badge. Classes tend to fill up two weeks in advance. Payment must be made in full, in exact change or by check, at the time of registration. No registration will be taken by telephone. For more information, call x30304.

EAA badges: Dependents and spouses may apply for photo identification badges from 7 a.m.-9 p.m. Monday-Friday; and 8 a.m.-4 p.m. Saturdays. Dependents must be between 16 and 23 years old.

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

Aerobics: Classes meet at 5:30 p.m. Monday, Tuesday, Thursday and Friday and 9:30-11 a.m. Saturdays. Cost is \$35 for 11 weeks. For more information call Jill Hill at 480-0509.

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

Weight safety: Required courses for employees wishing to use the weight room are offered from 8-9:30 p.m. Feb. 8 and 22. Pre-registration is required. Cost is \$5.

Exercise: Low-impact class meets from 5:15-6:15 p.m. Mondays and Wednesdays.

Aikido: Martial arts class meets from 5-7 p.m. Wednesday. Cost is \$25 per month. New classes begin the first of each month.

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

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

Fitness program: Health Related Fitness Program includes a medical examination screening and a 12-week individually prescribed exercise program. For more information, call Larry Wier at x30301.

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Dates & Data

Today

Crew briefing: STS-72 Commander Brian Duffy, Pilot Brent Jett and Mission Specialists Dan Barry, Leroy Chiao, Winston Scott and Koichi Wakata will discuss the retrieval of the Japanese Space Flyer Unit, the deployment and retrieval of the OAST flyer and the two mission space walks at 9 a.m. Feb. 2 in Teague Auditorium. The briefing will be preceded by the presentation of the crew's Space Flight Medals.

Cafeteria menu: Special: baked chicken. Total Health: roast beef au jus. Entrees: deviled crab, baked chicken, beef cannelloni, steamed pollock, Reuben sandwich. Soup: seafood gumbo. Vegetables: seasoned carrots, peas, breaded okra, steamed cauliflower.

Monday

Cafeteria menu: Special: hamburger steak. Total Health: vegetable lasagna. Entrees: beef Burgundy over noodles, barbecue smoked link, vegetable lasagna, steamed fish, French dip sandwich. Soup: chicken and wild rice. Vegetables: buttered corn, steamed spinach, vegetable sticks, navy beans.

Tuesday

ABWA meets: The American Business Womens Association, Clear Lake Area Chapter will meet at 5:30 p.m. Feb. 6 at Bay Oaks Country Club. For more information call Nancy Hutchins at x34006.

Cafeteria menu: Special: turkey and dressing. Total Health: roast turkey. Entrees: barbecue spare ribs, liver and onions, baked chicken, steamed fish French dip sandwich. Soup: black bean and rice. Vegetables: steamed broccoli, California vegetables, breaded squash, savory dressing.

Wednesday

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

Astronomy seminar: The JSC Astronomy Seminar will meet at noon Feb. 7 in Bldg. 31, Rm. 129. An open discussion meeting is planned. For more information, call Al Jackson at 333-7679.

Cycle club: The Space City Cycle Club will meet at 5 p.m. Feb. 7 at the Grumman Bldg. at Ellington Field. For more information call Mike Prendergast at x45164.

Cafeteria menu: Special: Mexican dinner. Total Health: ground turkey tacos. Entrees: beef cannelloni, turkey tacos, steamed fish, Reuben sandwich. Soup: seafood gumbo. Vegetables: peas and carrots, ranch beans, mustard greens, Spanish rice.

Thursday

NPM meets: The National Property Management Association will meet at 5 p.m. Feb. 8. For more information and meeting location call Marie-France Smith x39309.

Airplane club meets: The Radio Control Airplane Club will meet at 7:30 p.m. Feb. 8 at the Clear Lake Park Community Bldg. For more information call Bill Langdoc at x35970.

Cafeteria menu: Special: smothered steak. Total Health: steamed pollock. Entrees: chicken and dumplings, corned beef and cabbage, broccoli cheese quiche, steamed fish, French dip sandwich. Soup: navy bean soup. Vegetables: steamed cabbage, cauliflower au gratin, buttered carrots, lima beans.

Friday

Astronomers meet: The JSC Astronomical Society will meet at

7:30 p.m. Feb. 9 at the Lunar & Planetary Institute 3600, Bay Area Blvd. For more information call Chuck Shaw at x35416.

Cafeteria menu: Special: baked meatloaf. Total Health: baked potato. Entrees: chicken fajitas, ham steak, pork and beef eggrolls, steamed fish, Reuben sandwich. Soup: seafood gumbo. Vegetables: stewed tomatoes, seasoned spinach, cut corn, macaroni and cheese.

Feb. 14

MAES meets: The Society of Mexican American Engineers and Scientists will meet at 11:30 a.m. Feb. 14 in the Bldg. 3 Cafeteria executive dining room. For more information call Michael Ruiz at x38169.

PSI meets: The Clear Lake/NASA Area Chapter of Professional Secretaries International will meet at 5:30 p.m. Feb. 14 at the Holiday Inn on NASA Road 1.

The focus of the meeting is to orient new members and future members. Chapter members will present an overview of the goals and missions of PSI and the benefits of membership. For more information call Elaine Kemp at x30556.

Feb. 15

Directors' meet: The Space Family Education board of Directors, which sets policy for the JSC Child Care Center, will meet at 11:30 a.m. Feb. 15 in Bldg. 45 Rm. 712D. For more information on this open meeting call Gretchen Thomas at x37664.

Feb. 21

Scuba club meets: The Lunarfins will meet at 7:30 p.m. Feb. 21 at Redfish Restaurant under the Kemah/Seabrook Bridge, Seabrook side. For more information call Fred Toole at x33201.

Swap Shop

Swap Shop ads are accepted from current and retired NASA civil service employees and on-site contractor employees. Each ad must be submitted on a separate full-sized, revised JSC Form 1452. Deadline is 5 p.m. every Friday, two weeks before the desired date of publication. Ads may be run only once. Send ads to Roundup Swap Shop, Code AP2, or deliver them to the deposite box outside Rm. 181 in Bldg. 2. No phone or fax ads accepted.

Property

Sale: Alvin, 10 acres, barn, partially fenced, major road. 532-4237.

Sale: LC Bay Ridge Subdivision, 3-2-2, cul-de-sac, new roof, \$55k make offer. James, 286-1934.

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

Sale: Wooded lot, 1+ acres, deed restricted N.W. subdivision, paved streets, elect, water, \$9k, terms. 333-4609.

Sale/Lease: Heritage Park, 3-2-2, \$65k/\$780 mo. x38074, 480-8099.

Lease: Egret Bay condo, 2-2-2CP, split plan, W/D, FPL, fans, \$525 mo + deposit. 486-8551.

Lease: Meadow Green, 3-2-5-2, 2 story, cul-de-sac, FDR, fans good cond, \$900 mo + deposit. 486-8551.

Sale: Waterfront lot, Galveston Bay, Seabrook, all utility taps, Corps bulkhead permit. Ed Shumilak, x37686 or 334-7985.

Sale: Bay Glen, 4-2-5-2A w/study/opt 5th BDR, over 2100 sq ft, huge LRM w/gas FPL, lg MSTR w/garden bath, covered patio, \$115k. 486-6726.

Sale: Webster, 2-2-2CP condo, new A/C, kitchen & bath upgrades, FPL, W/D conn, \$39.5k. 280-0265.

Sale: Holly Hall townhome near Medical Center, 2-2-5-2, 1648 sq ft, appliances, 24 hr security, avail immediately, \$79.9k. Jack Cohen, 488-3171.

Sale: Seabrook condo, 2-1-5, corner unit, FPL, pool, 2 balconies, appliances, \$32k. Laura, x31303 or 326-1573.

Wooded lot 90'x135' in Taylor Lake Estates, \$39.5k, can finance. Don, x38039 or 333-1751.

Lease: Bay Glen, 3-2-5-2+study, FDRM, non-smokers, 1600 sq ft, huge covered patio, big back yard, cul-de-sac, \$1050 mo. Leah, x34544 or 480-8780.

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

Cars & Trucks

'81 Chevette, 1 owner, 4 dr, 4 spd, new rebuilt parts, running cond, \$500 obo. 946-7028.

'86 Lincoln Towncar, Signature series, white, 1 owner, non-smoker, \$3.5k. 944-4758.

'90 LeBaron, Prem convertible, ex cond, low mi, new tires, CD, leather, \$10k. 488-6526.

'94 Lincoln Mark VIII, 24k mi, \$27k obo. x38976 or 409-925-5230.

'92 Mazda Miata, red/black, 5 spd, P/S, A/C, cruise, AM/FM/cass, P/W, ext warr, 35k mi, ex cond, \$14k obo. J. x31064 or 334-1766.

'82 Oldsmobile Delta 88, white, 4 dr, clean, runs good, A/C, new tires/water pump/battery, \$1.6k. 554-5492.

'93 Honda Del Sol Si, blue, 31k mi, 5 spd, Alarm, ex cond, \$12.9k. 280-0725.

'82 GMC 3.4 ton PU, \$1k obo. 282-3233.

'94 Buick LeSabre, great family car, 20k mi, \$14,750. 286-5971.

'86 Ford Crown Victoria, dark blue, P/S, P/W & P/L, cruise control, 156k mi. \$2k obo. x34627 or 334-4098.

'91 Pontiac Sunbird, 4 cyl, blue w/white top, power, 47k mi, \$7k. x38624 or 334-7767.

'89 Dodge Ram Charger, 318 V8, 2 WD, loaded, very clean, runs great, \$5.5k. Mike, x33838 or 998-7780.

'88 Ford Tempo, white, extra clean, 4 dr, auto, A/C, AM/FM/cass, good tires, \$2,495. 921-7212.

'90 Pontiac Grand Prix, great 2nd car or student car, \$5k obo. 291-9507.

'83 Mercedes 300 SD ex cond, low mileage, \$10.5k. 488-3588.

'84 Buick LeSabre Limited, 2 dr, 57k mi, good cond, needs some cosmetic work, A/C, P/S, P/B, AM/FM/cass, V8 305 engine, \$2.2k. 474-3517.

'78 Toyota Celica, 5 spd, 180k + mi, runs, \$500 obo. 534-3095.

'94 Pontiac Gran AM, 5 spd, 28k mi, ex cond, white, still under warr, \$9.5k. 333-2580.

'84 Honda Accord LX Hatchback, auto, A/C, 76k mi, great cond, \$2,650. 486-4701.

'94 Toyota Camry, 4 cyl, auto, A/C, loaded LE, 66k mi, 100k mi warr, ex cond, \$13.5k. x33623 or 373-3436.

'76 Ford Courier, .5 ton, 4 cyl, 4 spd, AM/FM radio, A/C, 158k mi, some rust, runs ok, \$500. George, 486-6944.

'94 Toyota Camry LE, showroom cond, sunroof, gold package, hunter green, CD player w/up graded speakers, \$15.9k. Amy, 932-9545.

'89 Dodge Carvan, ex cond, 1 owner, 95k mi, \$5k obo. x32202 or 992-3642.

'83 Buick Regal, 4 dr, good work car, \$500. 489-0625.

'80 Chevy 1 ton, single axle, good work truck needs motor, \$1.5 obo. 489-0625.

Boats & Planes
Procraft bass boat, 15', 85 hp Evinrude, stainless steel prop, 12/24 trolling motor, depth finder, 2 live wells, garage kept, very clean, \$2.5k. David, 478-2974.

Sunfish sailboat in good cond on Lake Placid 1 block off I-10 at Sequin, \$300. x35180 or 326-3706.

'78 Johnson outboard motor, 35 Hp, electric start w/all controls, \$985. 480-3839.

Time share, 21' sailboat, racing sloop 5 Hp motor, in water at local marina, free trial sail, \$110 mo, \$50 mo Dec - Feb. x37187 or 488-0323.

Hummingbird 3004 depth/fish finder, ex cond, new sensor, \$50. Charlie, 488-4412.

Cycles
'86 Honda Magna 700CC, ex cond, \$2.5k. 488-6526.

'96 Honda XR250 dirtbike, warranty. 286-8822.

'26' Huffy 18 spd mountain bike, w/accessories, ex cond, \$120. 946-7028.

10 speed Bicycle, Clic-Centurian, black, everything works, \$50. James, 333-7174.

Audiovisual & Computers

Global Village Teleport/Bronze 2400 baud fax modem for Macintosh, \$25 obo. Scott, x36132.

IBM XT286 w/monitor, ex working cond 6.22 DOS 125.xx. 488-37318 or 763-0663.

Compaq Deskpro 286, 1.2, 1.44, tape, lots of software, make offer. 488-5445.

Pioneer stereo cabinet, \$20. Barry, 286-5139.

486 PC, SVGA, 4MB RAM CD ROM, internal modem, sound & game card, 24 pin color dot matrix printer, Windows 3.11 Office package, Word Perfect 5.1. 992-7336.

Atari 520 ST, \$150; Atari 1040ST w/monitor, \$200; dot matrix printer, \$50. Jeff, x32869 or 482-5393.

Epson printer, model #3250, dot matrix ex cond, \$50. x39296.

Stereo speaker, receiver, dual cassette deck, CD player & speakers, sold together or sep, \$600 obo. x33117.

Kenwood receiver \$100; stereo speakers, \$40; Akai cass deck, \$40; Sony cordless phone, \$30; answering machine, \$20. Mark, x30818.

386 SX, VGA monitor, mouse, software, modem, color printer, obo. 488-6581.

Sega Genesis game, \$60; Sega Genesis games, \$12 ea; Sega plus 11 games, \$150. 992-5080.

CompuAdd 386 computer w/1.2 MB 5.25" drive, 40 MB HD, 14" Sansung CVGA monitor, mouse, misc S/W, Panasonic KX-1124, 24 pin dot matrix printer, \$500 obo; IBM PC jr w/expansion chassis; IBM color monitor, 640k memory, two 5.25" drives, in working cond, \$100. Richard x31488.

Musical Instruments
Bach Stradivarius Silver trumpet w/case, mouthpiece, cleaning access, \$400; Casio ToneBank electronic keyboard, CT-625, w/CD sound source, 210 sounds, auto-rhythm/accompaniment/harmonize, \$250. Allyson, x39318 or 486-4663.

Photographic
Sharp VHS camcorder w/12x zoom, fader, time lapse, w/ carry case, 2 batteries, charger, video cables, tripod, \$400 obo. 282-2808 or 286-9820.

Pets & Livestock
Free 2 cats, 1.5 yrs, yellow striped male, neutered, declawed, Calico female, spayed, declawed, current shots, some supplies. 212-1396.

Household
Full size futon bed frame only, \$30. Kurt, x30291.

Couch, \$150; loveseat, \$100; recliner, \$100; end tables, \$50; coffee tables, \$50, all together \$400. 338-1799.

Country style queen size bed, \$100; queen sleeper sofa, \$150; blue recliner, \$65. Mark, x30918.

2 wall units, light oak veneer, ex cond, 72" x 30" x 17.5", \$200 set. Rick, x32505 or 480-3346.

Sears, 16.5 cu ft refrigerator, \$150; 10 cu ft freezer, \$100. 488-5445.

Tan couch w/2built in recliners & matching rocking/swivel/reclining chair, \$550; computer desk, \$25; 8 piece dish set, \$15; table lamp, seafoam green, \$15. 244-4431 or 286-9902.

Kenmore electric dryer, works great, \$100.

Merrell, x37570.

Formal dining table w/4 chairs, \$150 obo; blue sofa, love seat & chair, good cond \$225 obo; 19" color TV w/remote, \$150; vacuum cleaner, \$20; old Panasonic VCR, \$20. x31622 or 480-2870.

Black vinyl recliner, ex cond, \$75; coffee table, 5', bottom shelf, \$30 obo; end table, enclosed storage, \$20 obo. x38151 or 532-1100.

8' Hide-a-Bed sofa, black fabric w/small accents, full size mattress, ex cond, \$250. Mike or Brenda, 538-3435.

4 seat dinette set, wood/metal, great shape, \$40. Brian, 480-5430.

Custom made oak TV stand for up to 27" TV, also holds VCR & video tapes, \$100. Bob, 244-1758.

Couch, love seat, cherry coffee & end tables, \$300 obo. Shelia, 244-1777 or 488-7354.

GE 30" electric stovetop unit, fully working, \$50 obo. x36090 or 488-7427.

Kitchen/harvest table, 8', ash, trestle style, side benches, custom made, \$125. 326-4316.

Duncan Plyte mahogany dining suite, 6 chairs & china cabinet, \$1.5k. 996-0152.

Brass floor lamp, 7' tall, 3 adjustable heads, marble base, \$100. 326-4395.

Formal dining table, Queen Anne style, cherry wood w/6 chairs, ex cond. \$1k. 882-0405.

Kenmore gas range, ex cond, \$200; Kenmore portable dishwasher, ex cond, \$150. Merrell, x37570 or 339-0060.

BR set, full sz, antique green w/dresser, 5 drawers, chest & 2 night stands, Italian design, great cond, \$1.1k. Magdi Yassa, 333-4760 or 486-0788.

Wanted

Want personnel to join VPSI vanpool departing Meyerland Park & Ride at 7:05 am for JSC. Van pool consist of on-site personnel working 8 am/4:30 pm shift. Don Pipkins, x35346.

Want fixer upper house, from \$10k - \$50k. 992-5080.

Want canoe, bicycles, single speed preferred, small outboard motor, trolling motor. Gene, x38020 or 334-1505.

Want maternity clothes, size 4. 996-0152.

Want any year, make or model Honda, condition wrecked or non-working not important, looking for car in need of TLC. Tony, 486-5707.

Want '93 - '94 SR5 Toyota extended cab truck, automatic. x47049 or 480-3424.

Want roommate, new large 4 bedroom home in Seabrook, all amenities, \$375 mo. 474-4742.

Want non-smoking housemate to share 3 bedroom, 4,000 sq ft gorgeous waterfront home on Taylor Lake, pool, boat dock, & hot tub, own furnished bedroom & bathroom, \$575 w/all bills pd. Leah, x34544 or 480-8780.

Want housemate to share 3-2-5, 4 story waterfront townhouse w/1 other person, amenities include community pool, private hot tub & tanning bed, 2 bars, 2 decks overlooking canal, boat slip, shared study & enclosed garage, \$595 mo + 1/2 utilities. Terry, x39234 or 335-0113.

Miscellaneous

Peavey SP-4 DJ speakers, \$800; Junior fog machine, \$200. Jimmy, 337-5583.

Sectional couch, great condition, \$450 obo; non-working VCR, \$50. x33117.

Little Tikes large Outdoor Activity cube w/slide & bench, ex cond, \$80; Teledyne water Pk, \$10. 282-4078 or 339-2056.

R

Japanese Rendezvous

STS-72 retrieves Space Flyer Unit, retrieves, deploys OAST Flyer, tests station hardware during space walks



The first mission of 1996 saw cooperation between two nations and testing of techniques for the future.

On flight day three, Commander Brian Duffy and Pilot Brent Jett maneuvered *Endeavour* toward the Japanese Space Flyer Unit and Mission Specialist Koichi Wakata plucked the satellite from its orbit and placed it in *Endeavour's* cargo bay, completing a mission begun by the Japanese 10 months before and ending with American astronauts bringing the satellite home.

NASA's extensive work to prepare astronauts and engineers for assembly of the International Space Station continued on STS-72. Mission Specialists Leroy Chiao, Dan Barry and Winston Scott spent more than 13 hours in space testing tools and techniques

that future space walkers will use to assemble the station in low-Earth orbit.

Through it all, the crew captured photos to share. From left to right, top to bottom:

1) *Endeavour* glides through space, backdropped against Australia's Shark Bay.

2) In *Endeavour's* airlock, Chiao, left, and Barry prepare for the first space walk of the mission that will test tools and techniques for the International Space Station.

3) During off-duty time, Wakata juggles a variety of objects in micro-gravity.

4) Chiao checks equipment for his space walk on *Endeavour's* mid-deck.

5) The traditional in-flight crew portrait includes, in front from left, Barry, Duffy and Chiao. Back

row from left are, Wakata, Jett and Scott.

6) Duffy mans the commander station during rendezvous operations with the SFU.

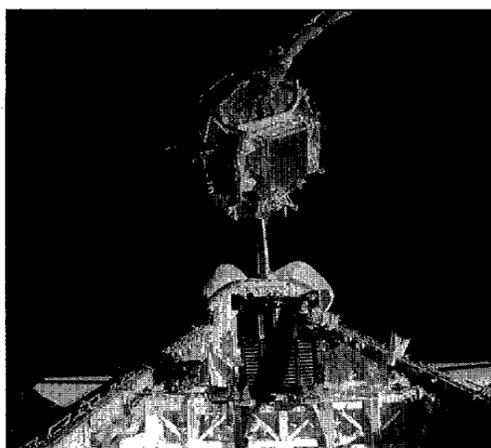
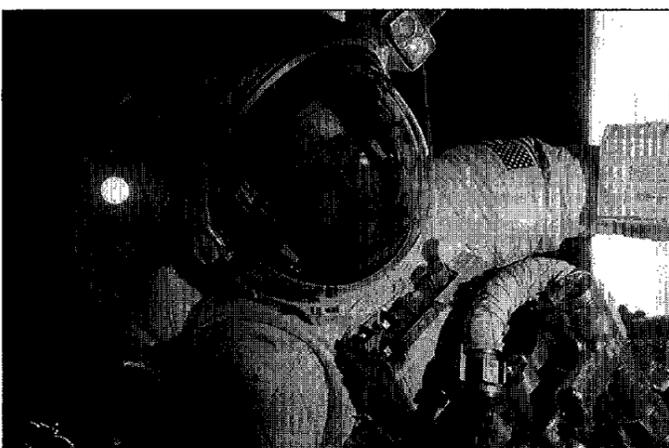
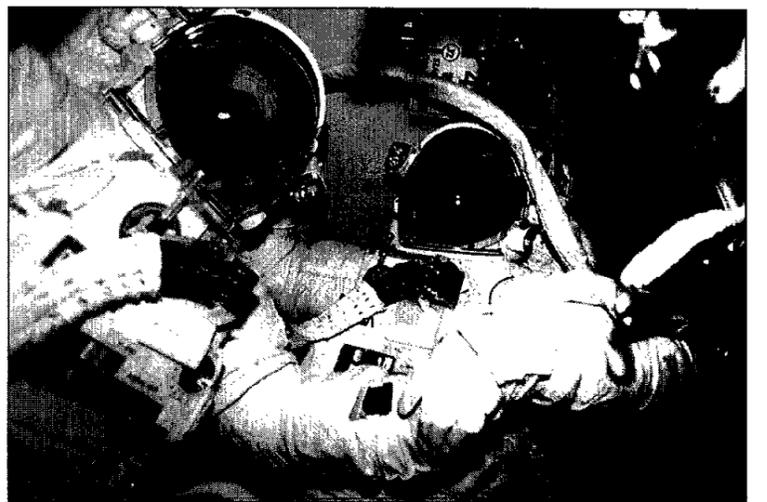
7) During the first space walk, Barry unfolds the rigid umbilical in *Endeavour's* payload bay.

8) On *Endeavour's* forward flight deck, Scott checks procedures for SFU rendezvous operations.

9) Barry spends some of his more than six hours in *Endeavour's* cargo bay during the first of two space walks.

10) Wakata captures the Space Flyer Unit and berths the satellite in *Endeavour's* cargo bay. After capture, Wakata deployed and retrieved the OAST flyer also in the payload bay.

11) Jett checks procedures at the pilot's station on *Endeavour's* flight deck. □



Wood earns Eagle Award

W.B. Wood of the Crew and Thermal Systems Division will receive the Eagle Manned Mission Success Award next month for his quick-thinking and decisive action in developing the Extended Length General Purpose Cutter Tool used by the Mir 19 cosmonauts to unfurl an auxiliary solar panel.

Wood and his team designed, fabricated, tested and delivered a tool within six days of the initial request. The tool was shipped to the Russian Mir Space Station via *Atlantis* during STS-71. After *Atlantis* returned to Earth, the Mir 19 cosmonauts cut the tubing and unfurled the stuck solar array.

The Eagle Manned Mission Success Award, established in 1984, is presented annually in recognition of individuals or groups that make a significant contribution to manned space flight. The award was established through a gift to the National Space Club Scientific and Education Foundation in honor of the STS-51A crew.

Wood is the second JSC employee to be honored with this award. He will accept the award March 22 at the annual Goddard Memorial Dinner in Washington, D.C.

Beisert hangs plaque

Overcoming her fear of heights, Susan Beisert climbed the ladder to hang the STS-72 plaque in Mission Control on behalf of her Payload team and the Payload Thermal Engineering team.

The Payload team including, Roger Galpin, Mark Severance and Helen Dutton of the Operations Division and Jeff Larson, Lee Gonzales, Amie Allison, Jim Runke, Robert Grilli, Donna Stephenson, Don Settle and Susan Horelka of Rockwell worked with the Payload Thermal Team of Ray Serna of the Structures and Mechanics Division, Rick Miller Systems and Cargo Engineering Office and Cathy Rose of Rockwell,



Wood



Beisert



Cooper



Williams



McBarron



White

during the mission keeping a close eye on the six key temperatures of Japanese Space Flyer Unit. Each new orbit required a new set of data to warm thruster modules.

"We needed the redundant heater string to provide additional thermal control," said Bryan Austin, flight director. "Susan and team members spent the next 24 hours analyzing temperature and heater cycles."

Secretaries earn honors

Two secretaries recently earned the Marilyn J. Bocking Secretarial award for excellence.

Sherie Cooper of the Shuttle Engineering Office was recognized for her outstanding ability to handle complex and additional duties during a time of reorganization. Her positive attitude and rapport with the office staff make

her a valuable asset to the Engineering Directorate.

Sharon Williams of the Automation, Robotics and Simulation Division was recognized for her positive attitude and her performance under high pressure situations. Her initiative in handling administrative duties helps both managers and personnel perform their jobs and meet deadlines.

McBarron wins award

Jim McBarron of the Crew and Thermal Systems Division will receive the Arch T. Colwell Merit award later this month at the Society of Automotive Engineers International Congress.

McBarron, the co-author of "International EVA Systems Interoperability Status," was selected as one of 13 papers from more than 2,000

entries submitted to the award board.

The Arch Colwell award was established to recognize authors of outstanding papers presented at SAE meetings. Papers are judged for their value to existing knowledge of mobility engineering. McBarron will accept his award at the honors convocation Feb. 27 in Detroit.

Nurse named director

Ramona White of Kelsey-Seybold recently was elected director of the Texas State Association of Occupational Health Nurses board.

An active member of the Bay Area Chapter, White ran for state office this fall and will assume duties of director of awards, correspondence and benevolence. White has worked in the Occupational Health Clinic for the past 28 years.

People

Rodeo lift-off party set, other events planned

February has been designated "Go Western" month at JSC and it will kick-off Feb. 16 with the Rodeo Lift-off party at the Gilruth Center's old pavilion.

The Original River Road Boys will provide Country and Western music. Tickets cost \$5 and include beer, wine, soft drinks, hot dogs and chicken wings. Gates open at 4:30 p.m. with the band starting at 5 p.m. Tickets are available at the Exchange Store through Feb. 15.

During the afternoon of the dance, JSC will be the site of the first annual JSC mini trail ride. Several JSC employees will stage a small procession through the center. During the dance, employees will be able to enjoy a hay ride.

All employees are encouraged to "dress western" each Friday in February.

Also, a contest for the "best" western outfit will take place at the Bldg. 3 cafeteria at noon on Feb. 16 with prizes awarded to the first, second, and third place winner.

Also on Fridays in February, the NASA area Go-Texan committee will provide demonstrations and briefings on western and rodeo events in the Bldg. 3 cafeteria. Rodeo type events are also scheduled at the child care center on Fridays.

The Rodeo Lift-off Committee and the Employee Activities Association will sponsor the western events.



Career seminars set for February

JSC's Career Transition Assistance Program is once again offering special topic seminars during the month of February.

CTAP will offer "Starting A Business," "Becoming a Consultant" and "Networking" in February. The "Networking" seminar has been modified to include the practical aspects of small talk, a skill necessary for successful networking. Employees should call CTAP at

x34300 for dates.

In addition to the special topics seminars, the standard CTAP workshop on career transition will be offered along with counseling services. More seminars are being planned for the spring.

CTAP is a confidential, contractor-run service for civil servants interested in exploring a number of career-related topics. The center is in Bldg. 45, Rm. 308.

Shuttle missions increase to Mir

(Continued from Page 1)

subsequent NASA/RSA negotiations beginning in March. Under this agreement, the following will occur:

- The jointly-developed Science Power Platform would be launched to the station on the shuttle. The platform includes arrays to power experiments in the Russian modules, and attitude control equipment.
- Russia would modify the Soyuz capsules to accommodate a larger percentage of astronauts. The Soyuz will serve as the emergency return vehicle through the end of construction in June 2002 when a

new NASA-developed vehicle becomes available. Size restrictions of the Soyuz capsules currently would prevent nearly half of the astronauts from being eligible for tours.

Russia would increase the payload-carrying capability of the Progress resupply craft by 440 pounds, and would develop a new vehicle, called the FGB cargo vehicle, which would haul station-keeping propellant to the space station.

As part of the Phase 1 extension, NASA would have opportunities for additional astronauts to perform long-duration missions on Mir.

Road repairs continue around JSC

On-site street repairs continue at JSC with new roads reopening and others closing to continue the repavement process.

These projects have been carefully planned to minimize the impact to JSC occupants and visitors. As street repairs progress, temporary alternate routes have been opened, allowing personnel to complete their trips around JSC.

"The road surface failures approaching the intersection of Avenue B from the south and Second Street is next to be replaced," said Ronald Stone of JSC's Construction Office. "It will be performed working half of the street at a time. This work should be completed in early February, but road work schedules are always dependent on weather conditions.

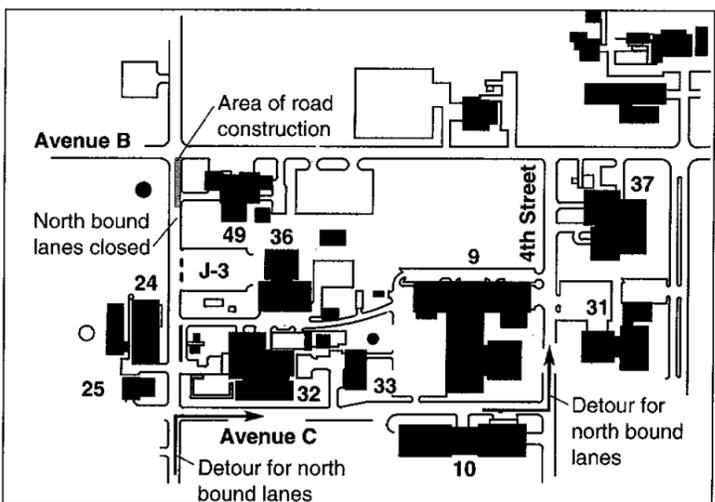
"Weather is our big concern due to the impact to vehicle traffic and challenging conditions for pedestrians. Everyone has been very cooperative about the inconvenience of this construction work and we appreciate it. Our goal is to cause the least problem to the site personnel and complete the contract on time," Stone added.

Stone urged employees to be more cautious when driving through congested construction areas. Follow directions and signs given by traffic directors and markings.



JSC Photo by Benny Benevides

As workers complete road construction on one street at JSC, engineers prepare to close off portions of Second Street at Avenue B to begin repairs. Employees will be detoured to Avenue C and Fourth Street until the pavement is repaired. The parking lot in front of Bldg. 36 will remain open during the construction.



Station module in testing stages

(Continued from Page 1)

undergo mechanical installation in May and begin pressure tests in July. The habitat module is among the last pieces for launch in 2002.

Boeing also is building an airlock module for the station. Welding on the airlock has begun and will be completed in June. Once the airlock

is built, it will mark the completion of welding of every major structural component being built by Boeing.

NASA's international partners also are making progress on their hardware. The critical Russian-built Functional Cargo Block is on schedule for launch on a Proton vehicle in November 1997. In December 1995,

the FGB experienced a pressure test failure. Khrunichev, the Russian subcontractor building the FGB had seen this anomaly in prior modules similar to the FGB. Recently, Khrunichev completed repairs and carried out the pressure test successfully. The FGB is back on schedule.

Tuskegee airman Carter to discuss black history at Gilruth

(Continued from Page 1)

The Tuskegee Airmen made history during World War II, not only for African Americans, but for all Americans. The Tuskegee Airmen, an all black escort unit, served in the Army Air Corps during World War II. The 332nd Fighter Group, consisting of the 99th, 100th, 301st, and 302nd fighter squadrons, became the flying escort for heavy bombers. The group became famous because it was the only Army Air Force fighter group that never lost an escorted bomber to enemy planes. Although the Tuskegee Airmen did not set out to be in the annals of American history, these brave young men served, fought and died for their

country because they were proud to be Americans and because they wanted the same rights, privileges and opportunities of other Americans.

The Tuskegee Airmen were founded as a result of legislation enforced by the Civilian Pilot Training Act, passed on April 3, 1939. The act gave African Americans the opportunity to train as pilots and a chance to prove that they could learn to fly. The law, however, did not grant them acceptance as military pilots in the Army Air Corps. On July 19, 1941, the first 13 cadets at Tuskegee Army Air Base began military pilot training. A total of 992 pilots graduated from the Tuskegee Army Air

Base. The 99th Fighter Squadron's first combat assignment took place on June 2, 1943. The assault on Pantelleria caused the Italian island to surrender on June 11, 1943. For the first time in history, air power alone had completely destroyed all enemy resistance. The 332nd Fighter Group flew 1,578 missions, destroyed or damaged more than 950 vehicles on the ground and 400 enemy aircraft, and sank a German destroyer. The 332nd Fighter Group received three Distinguished Unit Citations.

Many Tuskegee airmen became successful leaders. Among the most outstanding graduates of Tuskegee was Daniel "Chappie"

James, the first African American appointed a four-star Air Force general. Carter and the other Tuskegee Airmen have opened many doors for today's African Americans and for generations to come. Their contributions have made an impact on U. S. history and the U.S. space program—they were among the forerunners to NASA's African American engineers, scientists and astronauts. It is the spirit of the Tuskegee Airmen and others like them in America's black history that will be observed during the Feb. 12 program.

All JSC employees are invited to attend. The meal is \$8.50 per person. For more information, call Patricia Burke at x30606.