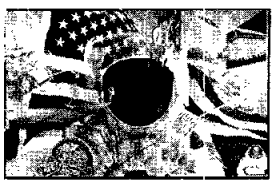
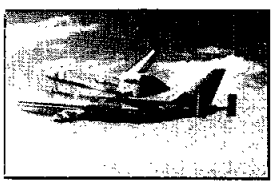
NASA
National Aeronautics and Space Administration
Lyndon B. Johnson Space Center
Houston, Texas



Part 3

Excerpts from the new JSC strategic plan look at living and working space. Story on Page 3.



***Columbia* coming**

The Space Shuttle *Columbia* is expected to stop over at Ellington Field next week on its way back to Florida. Story on Page 4.

Space News Roundup

Vol. 31 | **January 31, 1992** | No. 5

Bush pledges continued space support

President Bush kicked-off International Space Year — a year-long, worldwide celebration of cooperation and discovery — by telling astronauts young and old last Friday that he will continue to support the space program in words and budget proposals.

Bush made his pledge before and during a call to the STS-42 crew in orbit aboard *Discovery* while NASA Administrator Richard Truly, the crews of four of NASA's most recent space shuttle missions, ISY dignitaries, and students and teachers from the Young Astronaut Program participated in Washington, D.C.

Bush said his fiscal 1993 budget proposal will include $2.5 billion for Space Station *Freedom*, an 11-percent increase over this year's appropriation; $250 million for the National Launch System; and $80 million for the National AeroSpace Plane.

The President said America's destiny must include manned exploration of space and stressed that such pioneering is an investment that will create jobs and economic opportunity. Bush credited the space industry with more than $1 billion a year in exports of goods and services, an effort he said is worth 20,000 jobs.

"Keep up the fine work," Bush told the STS-42 crew during a live television hook-up that included questions from some of the Young Astronauts present. "You're on the cutting edge, and you're setting a great example for the rest of our country and the rest of the world."

One Young Astronaut asked what planets the crew had seen while orbiting the Earth.

"Of course, we have the world's greatest view of our world, but on some of our night passes we can see Saturn, Jupiter, Mars and Venus," said Mission Specialist Bill Readdy, "It's really spectacular up here. Hope we can go to Mars here one of these days."

Bush then responded to Readdy's statement: "We're going to keep trying to get this program geared up to do just that and maybe, just maybe

Please see **BUSH**, Page 4

ISY

Bush proposes another budget boost for NASA

By Brian Welch

For the third straight year, President Bush is calling for a real increase in spending on civil space activities with the submission of a $14.9 billion fiscal year 1993 budget request for NASA.

The fiscal '93 request, which represents a 4.5 percent increase over this year's appropriation, offers what NASA Administrator Richard H. Truly called "evidence of the President's belief that this investment in our future provides numerous benefits to America and spurs the nation's competitiveness."

The budget request calls for spending $2.25 billion on Space Station *Freedom,* a program now 47 months from first element launch, and $3.11 billion for space shuttle operations in FY '93.

The fiscal '93 request also marks the first year that funding has been included for space station operations, Truly said. "Now you know it's real as we proceed toward assembly of this world-class international space station," Truly added.

While generally good news for the agency, the budget request does mirror the tough economic choices of the times. Under the fiscal '93 plan, funding would be terminated for the advanced solid rocket motor and the Comet Rendezvous/Asteroid Flyby mission. The Cassini unmanned probe to Saturn, for years a part of CRAF/Cassini planning, would continue to receive funding.

Under the plan for the coming fiscal year, NASA would spend $7.73 billion for research and development, $5.26 billion for space flight, control and data communications, $319 million for construction of facilities, $1.66 billion for research and program management, and 15.9 million for the Office of Inspector General.

NASA Photo

STS-42 Commander Ron Grabe answers a question during the in-flight news conference Tuesday as other crew members, from left, Mission Specialists Bill Readdy and Norm Thagard, Pilot Steve Oswald, Mission Specialist Dave Hilmers and Payload Specialists Ulf Merbold and Roberta Bondar, listen.

Truly unveils 'Vision 21'

NASA Administrator Richard Truly unveiled "Vision 21: The NASA Strategic Plan" on Monday, saying it is his plan and that he wants it to be every NASA employee's plan.

In a Goddard Space Flight Center speech that was broadcast live to all centers, Truly said the plan is the product of months of collective and individual work by he and his staff, the associate administrators and all the field center directors.

"The NASA strategic plan is a door to the future," Truly said, "a road map to guide the men and women of the NASA team as we ensure United States leadership in space exploration and aeronautics research.

"Vision 21 lays out the vision, the mission, the goals that will retain our leadership in space science and the exploration of the solar system; help rebuild our nation's technology base and strengthen our leadership in aviation and other key industries."

Truly said the first thing the plan does is state the agency's vision, its reason for being:

"NASA exists to inspire and better the lives of all Americans, young and old, through our achievements as the world leader in space exploration and aeronautics research."

Toward that end, he said, the plan has four overarching goals:

• To advance scientific knowledge of the planet Earth, the Sun, the solar system, the universe and fundamental physical and biological processes;

Please see **TRULY**, Page 4

Eight-day IML-1 flight 'awesome'

By Kelly Humphries

The Space Shuttle *Discovery* and its international crew touched down safely Thursday morning at Edwards Air Force Base, Calif., after stretching their mission to add an extra day of scientific experiments.

Landing on Edwards Runway 22 was at 10:07 a.m. CST, 8 days, 1 hour and 14 minutes after an 8:52 a.m. Jan. 22 launch. The deorbit burn and reentry went smoothly, confirming that the discovery overnight of a slight oxidizer leak from one of the shuttle's aft reaction control system jets posed no problem.

The science investigations did not end with the landing, however, as the crew — Commander Ron Grabe, Pilot Steve Oswald, Mission Specialists Norm Thagard, Dave Hilmers and Bill Readdy, and Payload Specialists Roberta Bondar and Ulf Merbold — immediately was whisked into the waiting arms of physicians and scientists who began detailed post-flight examinations.

STS-42 HILMERS THAGARD MERBOLD IML-1 BONDAR READDY GRABE OSWALD DISCOVERY

Scientists for the JSC-managed Microgravity Vestibular Investigations, and for the Mental Workload Performance and Space Physiology Experiments continued to collect data on the payload crew after landing. When added to the pre-flight and in-flight data, the information should give scientists a clearer picture of how the astronauts adapted to the weightless environment on orbit and readjusted to Earth's gravity.

Because of the examinations, crew members will be returning to Houston at different times. No formal welcome home ceremony is planned until the employee briefing, now scheduled for 3 p.m. Feb. 11 in Teague Auditorium.

"Awesome" was how Mission Manager Bob McBrayer described the accomplishments of the STS-42 flight. "It's just great to see a good plan come together and that's exactly what has happened with this mission."

The orbiter and the Spacelab payload support systems and experiment hardware performed "at near perfection," he said. "Throughout the mission, the STS-42 crew has maintained an intense timeline and performed experiments

Please see **IML-1**, Page 4

Four at JSC earn top executive honors

Four of JSC's top executives have been awarded 1991 Presidential Rank Meritorious Executive Awards, the second highest honor a government employee can receive.

President Bush announced the presentation of Meritorious Executive Awards to JSC Chief Council Henry W. Flagg Jr., Orbiter and GFE Projects Office Manager Daniel M. Germany, Center Operations Director Kenneth B. Gilbreath and New Initiatives Office Manager William J. Huffstetler Jr.

NASA's 1991 recipients received $10,000 lump-sum payments, silver pins and framed certificates signed by the President. They will be recognized at a Feb. 26 reception in Washington, D.C.

Presidential rank awards reward extended exceptional performance of Senior Executive Service employees for career achievements, significant cost reduction or avoidance, successful use of human resources, personal initiative and innovation, work quality and cooperation.

Flagg joined NASA and JSC in 1967 as an attorney advisor, planning, organizing and reviewing legal matters involving contracting, finance, personnel, labor relations, international affairs and intergovernmental relations. He was named assistant chief counsel for procurement and contracts in 1969, where he received the NASA Exceptional Service Medal in 1974 for his work in the acquisition of spacecraft, flight experimentation, space suits, training and simulation equipment, facilities and support services. He became assistant chief counsel for general legal matters in 1979 and JSC's chief counsel in 1980.

Germany joined NASA in 1966 as a project engineer at Marshall Space Flight Center, and moved to Headquarters as director of the Space Shuttle Orbiter Division in 1980. He came to JSC in late 1981 as assistant to the manager of the Orbiter Project Office and serving as the orbiter Mission Control representative, making on-the-spot decisions during early shuttle flights. He became manager of the new Shuttle Flight Equipment Project in 1983, where he directed the consolidation of all flight crew equipment contracts into one. He was named deputy manager of the Space Station Projects Office in 1985, deputy manager of the Orbiter and GFE Projects Office in 1987, and manager of that office in 1989. He chaired the initial safety assessment boards and ensured the checkout requirements for each of the orbiters returning to flight after the *Challenger* accident.

Gilbreath joined NASA at the White Sands Test Facility in 1964 as a supervisory engineer operating test facilities for Apollo propulsion systems. He became chief of the Laboratories Branch in 1965, chief of the WSTF Engineering Office in 1968, and White Sands manager in 1969. After initiating a highly specialized materials certification program after the Apollo fire, he moved to Houston in 1972 as deputy director of

Please see **FOUR**, Page 4

Flagg

Germany

Gilbreath

Huffstetler

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 Sesame Street Live (11 a.m. Feb. 8, Summit): $7.50

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.

The following discount tickets will be available soon:

EAA Mardi Gras Ball, Feb. 15.

EAA Walt Disney's Ducktales, March 24–29.

EAA JSC Picnic, May 2.

JSC

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 classes will be from 8-9:30 p.m. Jan. 29, and Feb. 6. Cost is $5.

Defensive driving — Course is offered from 8 a.m.-5 p.m. Feb. 29 and March 21. 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.

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

Flag football — Men's Saturday flag football registration will begin at 7 a.m. Feb. 4. Non-badged teams will sign up at 4:30 p.m. Feb. 7. For more information, call x30304.

Soccer — Mixed Saturday soccer registration will be at 7 a.m. Feb. 5. Non-badged teams will sign up at 4:30 p.m. Feb. 7. For more information, call x30304.

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

JSC

Dates & Data

Today

Cafeteria menu — Special: tuna and noodle casserole. Entrees: broiled codfish, fried shrimp, baked ham. Soup: seafood gumbo. Vegetables: corn, turnip greens, stewed tomatoes.

Monday

Cafeteria menu — Special: meatballs and spaghetti. Entrees: wieners and beans, round steak with hash browns. Soup: chicken noodle. Vegetables: okra and tomatoes, carrots, whipped potatoes.

Tuesday

Cafeteria menu — Special: fried chicken. Entrees: beef stew, shrimp Creole, sweet and sour pork chop with fried rice. Soup: beef and barley. Vegetables: stewed tomatoes, mixed vegetables, broccoli.

Wednesday

Open house — JSC's Printing Management Branch and support contractor Hernandez Engineering Inc., will host an open house in the Bldg. 227 "print shop" from 1-3 p.m. Feb. 5. Visitors will be offered a behind the scenes tour of a support service operation.

Cafeteria menu — Special: Swiss steak. Entrees: fried perch, New England dinner. Soup: seafood gumbo. Vegetables: Italian green beans, cabbage, carrots.

Thursday

Cafeteria menu — Special: stuffed bell pepper. Entrees: turkey and dressing, enchiladas with chili, wieners and baked beans. Soup: cream of chicken. Vegetables: zucchini squash, English peas, rice.

Feb. 7

Cafeteria menu — Special: Salisbury steak. Entrees: baked scrod, broiled chicken with peach half. Soup: seafood gumbo. Vegetables: cauliflower au gratin, mixed vegetables, buttered cabbage, whipped potatoes.

Feb. 10

ISSA meets — The Texas Gulf Coast Information Systems Security Association will meet at 11:15 a.m. Feb. 10 at the Holiday Inn on NASA Road 1. Terri Craig of Coopers & Lybrand will speak on "Information Security and Quality." Cost is $10 for members, $12.50 for guests. For more information, call Emily Lonsford, 333-0922.

Feb. 12

PSI meets — The Clear Lake/ NASA Area Chapter of Professional Secretaries International will meet at 5:30 p.m. Feb. 12 at the Holiday Inn on NASA Road 1. STS-44 Commander Fred Gregory, Pilot Tom Henricks, Mission Specialists Story Musgrave, Mario Runco and Jim Voss, and Payload Specialist Tom Hennen will present a PSI banner flown aboard the shuttle. For more information, call Cynthia Thomasen at x30599, or Pat Woolcock at 754-2570.

Feb. 18

Picnic committee meets — The 1992 JSC Picnic Committee will meet at 4:30 p.m. Feb. 18 at the Gilruth Center. For more information, call Ginger Gibson, x30596.

March 20

Abstracts due — The deadline for abstracts for the 17th annual Technical Symposium co-hosted by the Houston Section of the American Institute of Aeronautics and Astronautics and the University of Houston-Clear Lake's High Technologies Laboratory is March 20. Abstracts of 250 words or less should be submitted with a completed NASA Form FF427 to Bill Best, AIAA vice-chair, technical, RSOC/ R12A-130, 600 Gemini, Houston, 77058. For more information, call Best at 283-0261.

May 1

AIAA China trip — The Houston Section of the American Institute of Aeronautics and Astronautics and the Chinese Society of Astronautics are jointly sponsoring an International Space Year Commemorative Tour of Chinese Space Facilities from May 1-15. All AIAA members, applicants and their spouses are eligible. Cost is $3,085 double occupancy. For more information, call Jim McLane, 488-0312.

May 20

AIAA technical symposium — The 17th annual Technical Symposium co-hosted by the Houston Section of the American Institute of Aeronautics and Astronautics and the University of Houston-Clear Lake's High Technologies Laboratory will be May 20 at the University of Houston-Clear Lake.. For more information, call Bill Best at 283-0261.

June 1

Fuzzy logic workshop — JSC and the University of Houston-Clear Lake will host the third International Joint Technology Workshop on Neural Networks and Fuzzy Logic June 1-3, 1992 at the Gilruth Center. For more information, call Carla Armstrong, x39071.

JSC

Swap Shop

Property

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

Sale: Friendswood, 2 lots, 0.95 acre, all util, $32K/$39K or $55K/both. Ron, 996-9724.

Rent: CLC townhouse, 2-2.5-2, mirrored accents, gray carpet, FPL, patio, $750/mo. 289-6777.

Lease: Fuqua/ I 45, 3-2-2, $595/mo. Minh, 333-6806 or 484-2456.

Rent: Arkansas lake cabin, furn, screen porch, accom 8, $250/wkly, $50/dly. 338-2517.

Rent: Galveston condo, furn, sleeps 6, Seawall Blvd/61st St, pools, cable TV, wknd/wkly/dly. Magdi Yassa, 333-4760 or 486-0788.

Sale: Egret Bay Villa condo, 1-1-2CP, W/D, FPL, boat ramp, pool, assum low equity. 773-7982 or 335-1336.

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

Lease: LC, Meadow Bend, 4-2-2, FPL, blinds, fans, fenced, W/D conn, $925/mo. Mike, 992-5524.

Lease: Webster/Ellington condo, 2-1, $475/mo. Dave, x38156 or Herb, x38161.

Rent: Timeshare, one/two weeks avail anywhere, $575. 286-8417.

Sale: Brenham/Chappel Hill, FM frontage, 55 plus acres, water, elec, shed, fenced, trees, hay, $125K. 283-0484 or 334-5007.

Lease: University Trace condo, 1 BR, all elec, W/D, dishwasher, fans, exer rm, avail immed, $475/mo. 282-4616 or 488-2946.

Rent: Tranquility Lake condo, 1 BR, W/D, FPL, sec gate, $410/mo. Bill, x31167 or 333-9042.

Rent: Lake Travis cabin, priv boat dock, C/AH, fully equip, accom 8, $325/wkly, $80/dly. 474-4922.

Lease: Barringer Way, 2-1, W/D conn, pool, stor area, no pets, $425/mo. 486-2048.

Rent: Heritage Park, new section, 3-2-2, $850/mo. 289-6777.

Sale: Bayou Vista, bulkhead canal lot, West Bay, halfway between new dog track/beach, $4.5K. 339-1957.

Sale: LC, Meadowbend, 3-2-2, cov deck, new metal garage, new fixtures. John, x31929 or 334-3422.

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

Rent: Three horse stalls/pasture, full board/ pasture only. Scott, 283-5611 or 331-6847.

Sale/Lease: Tri-level bay home, 3-2, FPL, 27 x 12 storage, $79K or $850/mo. 333-6821 or 474-9155.

Rent: Vacation condo, accom 4 to 8, $650/wkly. Katie, x33185.

Cars & Trucks

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

'75 Oldsmobile, needs body work, good work car, $500 OBO. 488-0206.

'89 Nissan Pulsar, T-top, tinted, manual, stereo, 43K mi, ex cond, $8K OBO. 282-3506 or 777-0546.

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

'69 Buick Skylark, 4 dr, auto, pwr, new batt/ starter, ex cond. 649-5092.

'84 Nissan 300ZX, 2+2, auto, $4350. 481-3637.

'91 Buick Skylark, 4 dr, V6, auto, P/S, P/B, P/W, stereo, 17K mi, maroon, $9.7K. 481-1239.

'80 Pontiac, V6, auto, good cond, $1250. 481-3637.

'90 300ZX, twin turbo, 300 hp, 155 mph, 12K mi, ex cond, 4 wheel steer, antilock brakes, limited slip diff, Bose stereo, $25K. x38165 or 486-4141.

'85 Ford Tempo GLX, A/C, AM/FM/cass, good cond, 65K mi, $2K. x31543.

'84 Nissan King Cab PU, 5 spd, Brahma topper, bedliner, cruise, AM/FM/stereo, $2.6K OBO. 486-5734.

'65 Mustang, 289, 3 spd, A/C, orig eng, good paint, $5.5K. x30079 or 286-0303.

'84 Plymouth Voyager mini van, new A/C, shocks, brakes, AM/FM/cass, low miles, $4.2K. 480-6402.

'74 VW Super Beetle, new eng, blk, new tires, sticker, $2.5K. Ed, 333-6963.

Ford van, E-150, 351 V8, auto, A/C, P/S, P/B, AM/FM/cass, capt chairs, ex cond, $4K. Gene, 488-8678.

'85 Ford LTD Crown Victoria, 4 dr, auto, P/S, A/C, beige, records, 100K mi, $2490. Ricardo, 480-4515.

'91 Mazda MX-6, loaded, 8.6K mi, 6 yr/75K mi extend warr, ex cond. $13.5K. 335-2070 or 474-4354.

'85 Nissan 300ZX, T-top, 5 spd, AM/FM/cass, cruise, 88K mi, $5.9K OBO. 280-0410.

'76 Mercedes 300D, ex running cond, $1085 OBO. Jerry, x39287 or 554-6093.

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

'83 Buick Le Sabre, all pwr, OD, 4 dr, ex cond, $3.4K OBO. Jim, x33787 or 332-5725.

'89 Ford Probe GT, ex cond, 100K mi extend warr, $8750. Dan, 488-9005 or 457-2850.

'78 Buick Riviera, 75th anniv car, blk/gray, 403 V8, $1695. x35180 or 326-3706.

'85 VW Jetta diesel, 100K mi, no body damage/ rust, $2.4K w/CD player or $2K w/o. 282-3478 or 338-1976.

Boats & Planes

'75 Oachita 16' fiberglass bass boat, 85hp Johnson, Holsclaw tilt trlr, depth finder, ex cond, $1650. x34784 or 482-5190.

'90 VIP 21' center console w/150 Yahama, trlr, TM, DF, VHF, Loran, 2 dr, BT, $17K. 332-2318.

Loran Sitex, Koden C navigator, $175 OBO. x38413 or 554-2728.

'82 Wellcraft 18' center console Fisherman, 115hp Mercury; '86 drive-on Sportsman trlr, $5.7K. x34507 or 992-4821.

18' Prindle, double trapeze, new sails, ex cond, $1.8K; 22' 4" Gulf Coast sailboat, main jib, spinnaker, new uphols, ex cond, $2.5K. Greg, x32259 or 474-7634.

'84 Wellcraft 18' Fisherman, 150hp Yamaha rebuilt '91, trlr, extra prop, chart recorder, ice chest seat w/cushion, VHF radio, $6250. Steve, x39979 or 482-3696.

'88 Carrier Sports Cruiser, 32', twin 350s, gen, C/AH, Loran C fish finder, VHF radio, low hrs, ex cond, $68K or trade for motor home. 480-6402.

'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.

Cycles

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

'88 Honda Elite, 80 cc, ex cond, $675. 996-5165.

Audiovisual & Computers

386 w/super VGA, HD, floppy. 333-7345 or 474-2339.

MacIntosh IIsi, 3/40 w/superdrive, Sys 6.0/7.0, new Apple 12" hi-res color moni, extend kybd, $3K. 480-7054.

New Mac IIci, 5/80, SS 7.0, warr; Magnavox 14" color moni, extend kybd, SW, $4.1K. M. Beard, x31793 or J. Sjurseth, x31677.

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

286/10 MHz NEC, 20MB, 1.2M floppy, monochrome moni, 10 kybd, modem, Panasonic prtr, $800 OBO. 282-3506 or 777-0546.

Two IBM PC/XT, monochrome disp, 640K, 10MB HD, $300/ea or $500/both. 488-0345.

IBM PS/1, 512K, 3.5 FD, modem, mouse, DOS 4.01, MS 2.0, Prodigy, IBM users club SW, $550. 333-6753.

Panasonic KX-P1091 9 pin dot matrix, good cond, $40, ribbons, $4; approx 600 Avery tractor fed labels, 3.5 x 15/16, $3; prtr stand, $5; tractor fed paper, approx 1000 wht sheets, $4, approx 40 sheets ea of 8 types color/parchment paper, $6, $50/all; 80287 math copressor, 10 MHz, $45, 480-6797.

Sony XR-7050 tape deck, high perform, $230; Sony XM-3040, $150; Punch 75 amp, $230; AR 1703 plate speakers, $100; Alpine 6396 6x9 speakers, $180; Kicker woofers. Brian, 333-6059.

Photographic

Nikon 1 touch 100, 35mm camera, ex cond. 480-7257.

Musical Instruments

Yamaha D-11 kybd, MIDI compat, hard case, $540/both. 488-0345.

Musical kybd, books, ex cond, $100 OBO. 286-8261.

Pets/Livestock

AKC siberian husky puppies, 4 males, 4 females, blk/wht, ready 1/23/92, taking dep, $200. 991-5280.

Shih-Tzu, Lhasa Apso mix puppies, 4 males, 3 females, 4 colors, $100/ea. Bev, 339-1432.

Household

Two sofas, beige rust print, $100/ea; club brwn chair/ottoman, $125. 488-1234.

Four solid oak antique bentwood chairs, new oak rectangular trestle table, $350/set. 280-8746.

Queen sz mattress, box springs, frame, $40. 482-0661.

Traditional solid wood dinette set, plank top, octogonal shape, dk stain, 4 straight back chairs w/earthtone plaid cushions, $100. x30972 or (409) 935-5688.

Sears Kenmore refrig, 17 cu ft, ice maker, gold, good cond. Bill, x38378 or 992-5415.

Couch, chair, ottoman, ex cond, $195. Rob Kelso, x35483 or 480-2997.

Recliner chair, neutral weave, $45 OBO. Robin, 333-7345 or 474-2339.

Two velvet wrought iron and wood bar stools, brwn, ex cond, $60/pr OBO. x38033.

Brass framed mirror, $75. Mary, 922-6134.

Chromecraft dinette set, 48" round table, 4 swivel chairs, ex cond, qn sz matt, box springs. 286-8822.

Sanyo microwave, ex cond, $100. 996-5165.

Oak qn sz waterbed, padded side rails, $225. 476-4872.

Wanted

Want '82 or newer 4 dr car/Suburban, American w/less than 80K mi, foreign w/less than 125K mi, no body work, mech work OK, up to $2K. 339-1337.

Want VCR for occasional use; 10 or 12 spd woman's bike/access. Jack, x31713 or 480-0151.

Want Barbie Dream House, ex cond. 280-8746.

Want 6 undercounter cabinets, reasonable; 20 cu ft refrig, good cond. TJ, 333-5107.

Want female to play on mixed C softball team, exp desired, located in Bldg 1. x32077 or x35180.

Want complete telescope, 4-6 in reflector, 80 mm refractor, or Meade 2045-D Schmidt, assegrain, high quality optics, ex cond. Karl, x35031 or 333-4132.

Want Brio wooden trains, track, bridges, buildings. Ron, 335-8581 or 480-1491.

Want non-smoking female roommate to share 4-2 house in LC, prefer short term, $350/mo. 332-0607.

Want roommate to share 3-2-2 house in Shoreacres, $300 plus util. 470-7821.

Blues guitarist seeking bassist, drummer, vocalist, guitarist for informal sessions or band opport, prefer interm to adv. 488-3554.

Want vanpool riders, West Loop Park to NASA. Richard, x37557.

Want non-smoking roommate to share house in CLC, $250/mo plus 1/3 util. 286-5248.

Want windsurfer rack for car roof. Norman, x38808 or 480-2293.

Miscellaneous

Nelco home style sewing machine w/cab, $100 OBO. 480-2900.

Oregon Columbia bow, 25-40 lbs, hard case, quiver, arrows, string release, ex cond, $550. 332-2318.

Men's sz 10 Nike basketball shoes, gray w/navy trim, $39 OBO. x30122.

Golf clubs, Ping, Hogan Edge/Titilest clones, $18.25/iron, metal woods $37.50/ea. David, 554-5514.

Miniature bottled water filter, $100 OBO; Everex 286/16 MHz machine, $1K; eight new baseball card factory sets, $25/ea. Tony, 335-4299 or 482-4156.

Lawn Boy 19" mower, good cond, $75. Andy, 333-6671 or 332-9105.

Extension table, leaves, darkwood, $125; formal dress, lavender, silk organza, sz 8, $50. 333-9733.

Nike Air Jordan basketball shoes, boys sz 5, ex cond, $60. 283-0437 or 286-2401.

Toro 21" self prop mower, $60. Rogers, x38851 or 944-7042.

Precor 730e, stair climber, works arms/legs, timer, digital counter, $400 OBO. x31427 or 992-4307.

President/First Lady Gold Charter membership for 2, $1K, dues $75/yr. 326-2716.

Billiards table, 7 ft, balls, rack, chalk, cues, ex cond, $200; Marcy 3-station work out gym, butterfly, bench, abdominal, addition wall unit, was $1.1K, now $500. 283-4158.

Shoei Brite stripe full face motorcycle helmet, med, wht, $75. x39572 or 480-4780.

Large wood dog house, ex cond. $45 OBO. 338-2851.

New R/C XCELL-60 assembled helicopter, Enya eng, $650. 480-3424.

Shower wheelchair. 559-2000.

Collectable porcelain dolls, Franklin Heirloom Mint 19" Cinderella, Colby Collection 20" bride, ex cond, $125/ea. 488-6521.

Sport coat, 42L, blue, $15; cloth/leather/ polyester ties, $1-$3/ea; 3 pair dress pants, 34-36 waist, 34 length; deluxe AT&T answering machine, $40. Greg, 333-6672 or 484-4979.

Onkyo AM/FM rec, $90; Sony cass deck, $15; Sony Graph equalizer, $15, Spalding 10 spd bike, $125; golf bag, tan/brwn, $20; new 10 spd Maruishi bike, $200, equip, $50; desk, $20. 486-0844.

Dooney & Burke mini-pouch approx, 7x5x3, warr, was $150, now $120; new eelskin coach bag, burg/navy, $120; new eelskin men's wallets, $30. x30003 or 644-3137.

Newborn bathtub, attach liner, $5; boy's clothes, good cond, newborn to 2T, 50 cents to $5/ea; new boy's cowboy boots, sz 5, $10; new boy's blk dress shoes, sz 5. Michele. x35188.

Soloflex w/attach, ex cond, $750 OBO. 486-5734.

Two arm chairs, beige, $20/ea; redwood porch swing, $15; weight bench, w/o weights, $10. Stacey, x34507 or 992-4821.

Two 10 gal aquariums w/top, light, filter/pump, $50/ea; 10 gal wood stand, $35; 10 gal wood rod iron stand, $20. 991-6503.

New wood burning heating stove, $250. 482-3984.

Casio Pocket Vision TV, $30; Sony Watchman, $50; men's Justin lizard western boots, sz 12D, $75; 60 LP's, Pioneer turntable quartz lock, $120; Fisher VHS VCR, $125; 13" color TV, remote, $150. Pete, x33571 or 334-2963.

Table tennis table w/self-folding legs, 4 paddles, net, paddle rack, $100. x31538.

Wood garage door, 4 sect, 8' x 7', hardware, track, springs, ex cond, $125 OBO. Bill, 283-5384 or 326-1880.

Sears elec port typewriter, $65; Space almanac, $3; wine rack, $3; collapsible sewing mach, $12. Virginia, x38373 or 333-9296.

Tunturi stair climber, ex cond, $60. Susan, x30908.

Wooden bar stool, $15; after five dresses, sz 8-10. 480-3424.

Electric typewriter, ex cond, $100 OBO. 286-8261.

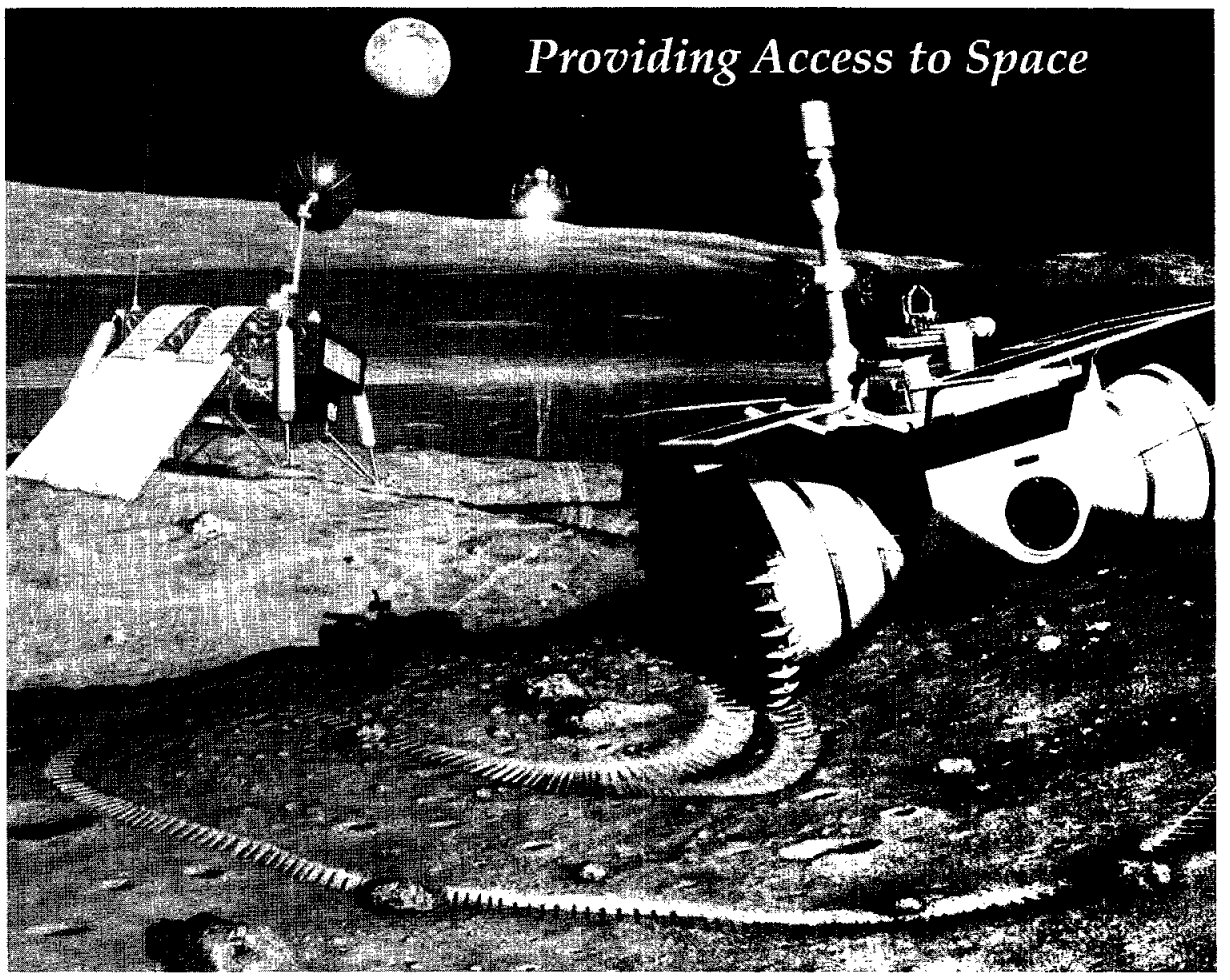
New Beta VCR; men's clothes, sz 32-34, women's clothes, sz 7, 9, 10; Space Shuttle items. 488-2946.

Wood dining table, $80; sm kitchen table, $30; king sz bed/frame, $20; 3 shelf bookshelf, $7, 3 piece gray pinstripe suit, $15; Facit desk calculator, $4; vintage comics, $25/all; 8' Christmas tree, $8; Tyke bike, $5 OBO. Wayne, 282-4349 or 480-3157.

Women's sz 6 eel boots, purse, $65; men's suit, new, sz 48, $50; Chinon camera, zoom lens, $90; women's 10 spd bike, $60; women's 14K jewelry; leather and fox coat, $150; bar stools, $30; or trade for items wanted, china cabinet, table, chairs, camper/trlr, prtr, toys, playhouse, pedal car, workbench, labor construction. 334-4361.

Four antique Bentwood chairs, ex cond, $100/all; sm barometer w/temp and humidity meters, $10; men's watch, new, w/sm diamond, interlock band, reprod, $60; grandfather antique clock, 7' tall, Westminister chimes, ex cond, $2.5K; antique blue venetian light fixture w/4 lights, $100; new Peruvian lg handmade wall hanging or rug, figures woven in, $75. 488-5564.

Pioneering Space Exploration



Editor's note: This is the third episode of a four-part serialization of the new JSC Strategic plan, "Pioneering Space Exploration: The JSC Strategy." This portion of the plan looks at ensuring continued access to space, and living and working in space. Next week: Helping JSC's people reach their potential.

In fulfilling the nation's space exploration objectives, JSC is responsible for ensuring that the U.S. has the capability to carry people and their equipment into space and to return them safely. As we fulfill our current responsibilities in conducting shuttle missions safely and successfully, we must begin to think of those responsibilities as building blocks to the future. We recognize that the shuttle is a vital link in the exploration process. With a focus on continued space exploration, we must also begin to consider long-term manned transportation strategies. We have to develop new ways to gain access to space that can extend our reach beyond low Earth orbit.

Fly the Space Shuttle Safely, More Effectively, and at Lower Cost

For our current access capability, our strategy is to continuously improve the shuttle and flight preparation and operations processes. To accomplish this, JSC will:

- Provide a shuttle capability through the first 10 years of the next century, assuring that this capability can be extended, if needed, to the year 2020. This includes maintaining the capability to produce another orbiter if required.
- Evaluate and implement upgrades to the shuttle system based on the following criteria: increased safety and reliability; cost effectiveness, including return on investment; extended vehicle operational lifetimes; and decreased technical obsolescence. We will also consider implementing upgrades based on their commonality with other programs.
- Continue to implement the Office of Space Flight's continuous improvement initiatives for the Space Shuttle Program. Reduce our portion of shuttle program costs by the 15 percent mandated by 1996 without compromising safety.

Ensure Continued Access to Space

For JSC to lead in the development of manned vehicles that will provide continued access to space, particularly as we explore beyond low-Earth orbit, we must begin today to study long-term manned transportation systems. JSC is committed to providing the management capability, the technology base, and an environment that guarantees a well-balanced approach to our dependence on current systems as we develop future capabilities. As we examine various options for getting people to and from space, JSC will:

- Evaluate programmatic needs, the availability and advantages of new technology, and the cost of replacement systems against the capabilities and the operational costs of the space shuttle.
- Reduce the time it takes to develop human-related systems.
- Structure plans for long-term manned transportation systems that meet the access needs required for extended exploration of space and provide a way to respond quickly in the event of unforeseen factors such as technical obsolescence or attrition in the orbiter fleet.
- Define the manned vehicle requirements for the developers of any future launch vehicle.

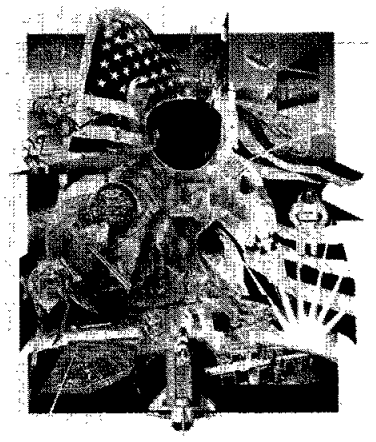
Living and Working in Space

Using the space shuttle, we can provide people access to low-Earth orbit where they can live and work for a limited amount of time. As we pursue our exploration-focused future, JSC will articulate, advocate, and demonstrate the capabilities and benefits of humans living and working in space, on the Moon, or on their way to Mars.

Space Station *Freedom* will provide us unique and immeasurably valuable opportunities for advancements in engineering, science, and research. In addition, Spacelab, an extended duration capability for the orbiter, and other space-based platforms all have unique aspects that will contribute to our eventual long-term habitation and use of the space environment. The experience we develop from these activities will be the foundation for further steps in the exploration process, just as Mercury and Gemini were the foundation for the Apollo program.

Conduct a Continuum of Life Science Research

Before we can extend the presence of humans in space, we must have a comprehensive understanding of how to sustain people in a healthy, safe, and productive condition for long periods of time in the harsh environment of space. Our research in human life sciences at JSC is critical to developing that understanding—without it, there simply can be no extended exploration of space by humans.



1992
Pioneering Space Exploration
The JSC Strategy

Our efforts in human life sciences research at JSC are, and must continue to be, extensive. We must understand the physiological and psychological impacts of being in the space environment and develop appropriate countermeasures. We must resolve every foreseeable health and safety issue. We must design effective life support systems, build technology that enhances human productivity, and develop operational procedures that make the most of human performance. We must provide food, clothing, and hygiene capabilities. We must be prepared to provide people with what they need to be healthy and productive as they learn to live and work outside Earth's boundaries. To increase our understanding of human life science requirements and capabilities, JSC will:

- Define the projected requirements for humans in space environments.
- Develop a plan with specific objectives to verify equipment, methods, and effective countermeasures for keeping people healthy and productive.
- Conduct life science research on the shuttle and space station to meet the specific objectives of the life science plan and to develop and verify countermeasures as early as possible for the longest duration flights anticipated.
- Conduct biotechnology research to grow cells in microgravity for potential health-related applications in space and on the ground.

Build and Operate Manned Facilities in Space

In addition to learning how people can live and work in space, we must also learn to operate systems and spacecraft for extended periods of time. Assembling the space station, bringing the facility into initial use, controlling it during unmanned periods, and achieving permanently manned operational status will provide us with a solid foundation we can build on to further our exploration activities. To develop our expertise in building, operating, sustaining, and using our space-based capabilities, JSC will:

- Use the shuttle to perform near-term exploration activities and to support verification of space station systems. Use the space station as a test bed to validate the longevity of systems and processes needed for future exploration activities.
- Develop systems, flight techniques, and operations procedures to accomplish rendezvous, proximity operations, and robotics-assisted assembly of large structures in space using the shuttle and shuttle-based extravehicular activity.
- Develop techniques to make optimal use of autonomous systems for operational activities in space. Continue to design and develop an assured crew return capability as an essential safety requirement for Space Station *Freedom*.
- Demonstrate the success of sustained international partnerships.
- Find ways for government, academic, or private sector users to take advantage of our assets in space and improve the methods we use to accommodate their specific requirements.

Extending Our Reach

As part of our exploration-focused future, we will extend our reach in space by returning to the Moon to explore, to live and work there, and to learn to use the resources available in space as we travel to Mars. Leading this country in the human exploration of space is what we at JSC intend to do. As we begin to travel, to live and work beyond low Earth orbit, JSC will lead the development and operation of all human-related transportation vehicles and surface systems. And that is a leadership role we must step up to today.

President Bush presented America with the challenge of returning to the Moon to stay and conducting manned missions to Mars. In 1992, NASA will begin to define the specific course of action we need to take to accomplish what the President tasked us to do. JSC must play an important role in the development of these specific strategies. To fulfill this responsibility, JSC will:

- Assist NASA Headquarters in developing a strategy to evolve the exploration architecture based on our national goals, identified constraints, and desired achievements. Retain the flexibility to respond to the realities of resource availability and to incorporate advantageous technologies and approaches as they are proven.
- Identify and develop the technology requirements to accomplish our milestones and assure that development efforts begin when needed.
- Influence and support agency decisions on establishing partnerships and assigning hardware responsibilities by developing a comprehensive technical understanding of available NASA, Department of Energy, and Department of Defense and other government capabilities; commercial services; university research; and foreign capabilities.

Develop Manned Vehicles and Human-Related Surface Systems

Consistent with JSC's demonstrated expertise, we will lead in developing the manned vehicles and human-related surface elements of the exploration architecture. The systems development associated with this will include responsibility for program management, systems engineering, flight testing, and operations. To accomplish this, JSC will:

- Define the early project requirements and concepts for manned transportation vehicles and for human-related surface systems.
- Build mockups and test beds to develop and verify critical systems and technologies. Analyze early exploration projects, such as lunar landers and Mars sample return missions, and pursue the manned and unmanned efforts that best fit JSC's expertise and responsibilities in the exploration process.

Assuring Technologies Are Ready When Needed

All future space missions will require systems that can operate for long periods of time with high reliability. Spacecraft systems will evolve from those being controlled and monitored from the ground to systems incorporating onboard autonomous control and space-based or surface systems needing minimal logistics support.

JSC will play two key roles in meeting the technology needs of space exploration: we will ensure that technologies are available when needed, and we will develop needed technologies which are unique to the center's mission and in those areas where JSC has particular expertise, experience, or facilities.

To ensure the availability of technologies when they are needed, JSC will:

- Identify requirements for technologies and capabilities to support exploration missions and advocate those technologies to organizations sponsoring technology development.
- Advocate and establish partnerships with other NASA centers, the Department of Defense, Department of Energy and the National Laboratories, other government research centers, academia, and the private sector to increase the effectiveness and efficiency of research and technology programs and to facilitate technology transfer to our center initiatives.

JSC currently uses a Technology Coordinating Committee, comprised of senior representatives from all directorates and project offices across the center, to coordinate and focus technology development. To accomplish our role in developing technologies that are unique to our experience and facilities, JSC will:

- Continue to use the special skills and services of the TCC to assure that technology work at JSC is closely coordinated with overall technology requirements definition activities.
- Review center technology efforts at least annually and discontinue work in areas where the effort does not support the objectives of the JSC strategy.

Black history seminar eyes 'Education 2000'

Month-long celebration will include panel discussions, program and art exhibits

The 1992 JSC Black History Committee will kick off February's Black History Month activities next Friday with the first session of a continuing seminar entitled "Education 2000."

This year's national black history theme is "African Roots Explore New World: Pre-Columbus to the Space Age."

Panelists for the first session of Education 2000, which starts at 11:30 a.m. Feb. 7 in the Gilruth Center, will include Thomas Foster, director of the Houston Christian Institute; and Thaddeus Lott Sr., principal of Wesley Elementary School.

Foster will begin a two-week discussion of the topic "If I Can Help Somebody," and Lott will begin a two-part discussion of "The Struggle of the African American in Education." Both men then will address questions in a panel discussion.

Education 2000 will continue with two new speakers, the Rev. Kirbyjon Caldwell, pastor of Windsor Village United Methodist Church, and the Rev. Robert Harper, minister of Highland Heights Church of Christ, at 11:30 a.m. Feb. 14 in the Gilruth.

Caldwell will pick up the topic "If I Can Help Somebody" and Harper will continue the discussion of African Americans in education, then the two will begin a panel discussion.

On Feb. 21, the Ensemble Theatre will present a short one-act off-Broadway play entitled "Do Lord Remember Me" at 11:30 a.m. in Teague Auditorium.

Former Philadelphia Mayor Wilson Goode will be the keynote speaker for the formal Black History Month program at 1:30 p.m. Feb. 28 in Teague Auditorium. Goode, who served as Philadelphia's mayor from 1983 to 1991, will discuss topical issues.

Art exhibits provided by the African American Art Galleries will be displayed Feb. 7 and 14 at the Gilruth Center, and Feb. 28 in the JSC Visitor Center lobby. Videos featuring important black history events will be played on the JSC Television Distribution System during the lunch hour every Thursday in February.

Civil service and contractor employees are invited to support the observances as their workloads permit. The public and other government and industry employees also are invited.

Wilson Goode

Columbia to stop over at Ellington

The Space Shuttle *Columbia*, en route from a California make-over to a Florida launch date, will stop over at Ellington Field next Friday.

Columbia, which has been undergoing extensive refurbishment and modification at Rockwell International's Palmdale, Calif., plant, is scheduled to arrive at Ellington in mid afternoon and be available for public viewing the rest of the day, weather permitting..

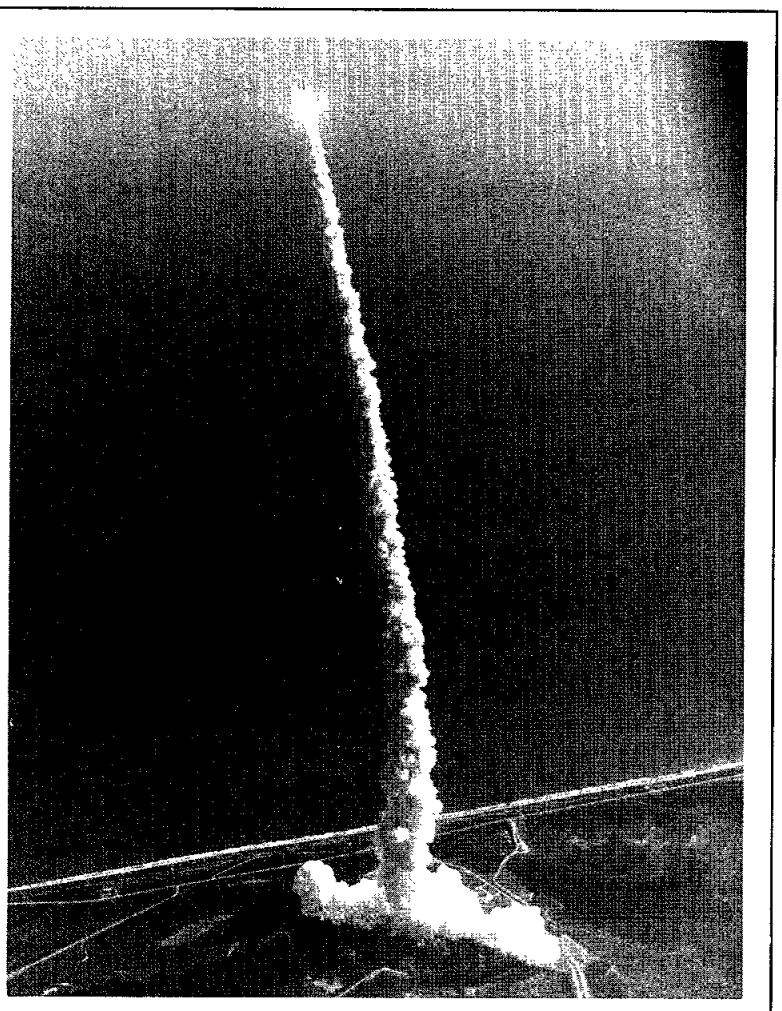
Any changes to the schedule will be posted on the recorded Employee Information Service, x36765.

The first shuttle to fly in space is on its way to Kennedy Space Center, where will be place in Orbiter Processing Facility Bay 3 for STS-50 processing.

JSC's print shop plans open house

JSC's Printing Management Branch and support contractor Hernandez Engineering Inc., will host an open house in the Bldg. 227 "print shop" from 1-3 p.m. Feb. 5.

Visitors will be offered a behind-the-scenes tour of a support service operation, including customer services; printing, electronic printing and mail services; microforms; programmatic and engineering data services and the electronic library of management and engineering records; and the Program Document Center.



NASA Photo

LOVELY LAUNCH—The Space Shuttle *Discovery* climbs steadily into orbit atop a plume of solid rocket exhaust. The Jan. 22 launch from Kennedy Space Center's Pad 39A began a highly successful International Microgravity Laboratory mission that concluded with a landing Thursday at Edwards Air Force Base in California.

New manifest sets flight rate at eight

NASA released its regular update of the mixed fleet manifest on Wednesday. The new manifest scales down the space shuttle flight rate to eight per year through 1996, a reflection of budgetary constraints.

The near-term shuttle flight schedule has changed little since March 1991. Since August, the only change to the flight sequence through fiscal year 1993 is the deletion of a flight opportunity in August 1993.

On the other hand, several flights — STS-42, STS-45 and STS-52 — have been accelerated to earlier dates. These accelerations were supported by the success of the continuous improvement activities that resulted in significant mission preparation efficiencies.

While the flight rate has been reduced to eight per year through fiscal 1996 and nine flights per year thereafter, resulting in the loss of seven flights through 1997, these reductions have been accommodated without significantly affecting customer commitments. This has been accomplished by deleting three flight opportunities and a number of payload opportunities, terminating the Aeroassist Flight Experiment and the Flight Telerobotics Experiment, and transferring the X-Ray Timing Explorer to a Delta II expendable launch vehicle.

TDRS-G has been moved back onto the shuttle in 1995. Space Station *Freedom* flights remain basically unchanged although three additional shuttle flights may be required in the absence of the Advance Solid Rocket Motor to support *Freedom*'s permanently manned capability by late 2000.

Shuttle missions scheduled for the upcoming calendar year include the April flight of *Atlantis* carrying the Atmospheric Laboratory for Applications and Science; the first flight of *Endeavour* in May to retrieve and reboost the Intelsat-VI communications satellite and to accomplish EVA experiments relating to Space Station *Freedom* assembly; the refurbished *Columbia* flight in June to conduct a 13-day extended-duration-orbiter flight carrying the U.S. Microgravity Laboratory; an August *Atlantis* Tethered Satellite mission; September missions with shuttles *Columbia* and *Endeavour* carrying LAGEOS II and Spacelab-J payloads; and the last scheduled, dedicated Department of Defense shuttle mission aboard the refurbished *Discovery* in December.

Two new Space Exploration Initiative precursor missions have been added to the manifest — the Lunar Resources Mapper and a Lunar Geodetic Scout are scheduled for launch aboard Delta II launch vehicles in April 1995 and March 1996, respectively.

IML-1 science harvest includes billions of cells, hundreds of plants

(Continued from Page 1)

to new levels of excellence."

The IML-1 harvest includes more than 100 crystals grown on orbit, billions of cells and hundreds of plants. The Biorack facility is returning 7.2 million nematodes, 3 billion yeast cells, 10 billion spores, 584 million other cell cultures and 3,942 insect eggs, and the Gravitational Plant Physiology Facility is returning 396 oat seedlings and 150 wheat seedlings.

The mission tested the international cooperation that will be needed to operate Space Station *Freedom*, combining the talents of more than 200 scientists from 16 countries including all of NASA's major space station partners, Canada, the European Space Agency and Japan.

"IML-1's success makes it an outstanding blueprint for future international cooperative programs," said R. Wayne Richie, IML-1 program manager. "NASA's strategic goal is the conquest of space. Given the clear status of the U.S. and world economy, it is clear that international cooperative missions that share the costs and the scientific results may be one of the best bets to tackling such enormous undertakings."

The decision to extend the mission was made Monday after flight controllers at JSC confirmed that the crew's conservation of its power resources had saved enough reactant fuels to support a longer flight.

The crew talked with two heads of state during the flight, President George Bush and Canadian Prime Minister Brian Mulroney, and with Dr. Alfred Gomolka, president of the Federal Council of Germany.

Payload Commander Thagard broke the record for most hours in space on his fourth flight. His 604 hours and 44 minutes in orbit surpassed Story Musgrave's 596 hours, 28 minutes, 16 seconds.

The STS-42 crew paid tribute to Sonny Carter, who was to have been a member of the crew but died in a plane crash last April, by taking turns wearing a Los Angeles Dodgers baseball cap that belonged to Carter.

Readdy also remembered the STS-51L crew during an in-flight news conference Tuesday, the anniversary of the 1986 *Challenger* accident. "We need a very stable space shuttle program in order to pursue all the rest of our goals," Readdy said. "I guess it being today, we're all very mindful of the sacrifices made along the way."

On the lighter side, *Discovery*'s crew participated in the first unofficial coin toss in orbit for a sporting event — the Super Bowl. Sunday's live hook-up with CBS Sports, which also featured a "Bondar toss," was seen by an estimated 120 million people worldwide.

Bush kicks off International Space Year with pledge to keep exploring

(Continued from Page 1)

colonel, one of these kids here today will be a part of that."

During the year, 29 space agencies and ministries from around the world, 10 international organizations and the United Nations will celebrate the spirit of discovery and will work together to promote a new era of global cooperation and to increase knowledge of planet Earth.

NASA has been designated by Congress as the lead U.S. agency responsible for developing and monitoring ISY events domestically and internationally. Dr. Lennard Fisk, NASA's associate administrator for space science and applications, is the lead U.S. representative.

In 1985, the late Sen. Spark Matsunaga from Hawaii proposed a 1992 International Space Year to commemorate the 500th anniversary of Columbus' discovering the New World and the 35th anniversary of the International Geophysical Year that ushered in the space age. Congress adopted ISY in 1986 and the United Nations General Assembly endorsed it in 1989. Today it has developed into a worldwide space activity.

The Space Agency Forum of ISY (SAFISY) has identified Mission to Planet Earth as the primary theme for ISY. Scientists around the world are observing and studying the planet to better understand the complex interactions between land, water, air and ice, and to assess such threats as global warming, deforestation and ozone depletion.

NASA's Mission to Planet Earth began in 1991 with the launch of the Upper Atmospheric Research Satellite and will continue in 1992 with the Atlas-1 Spacelab mission and Topex Poseidon, a joint mission with France, to study ocean topography.

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 Editor .....Kari Fluegel

Truly unveils NASA strategic plan

(Continued from Page 1)

• To expand human activity beyond Earth orbit into the solar system;

• To strengthen the competitive posture of the United States in the fields of space and aeronautics; and

• To attract young people to the wonders of mathematics, science and technology and ensure a more technically literate society equipped for the world of tomorrow.

The underlying capabilities that will make Vision 21 achievable are: a well educated, highly skilled, experienced, culturally diverse work force; cutting edge test facilities, launch pads, wind tunnels, computational centers, aircraft, laboratories and management systems; advanced space technology to bridge the gap between concept and application; a permanently manned space station; and high-confidence, reasonable-risk launch services.

Four earn top awards for merit

(Continued from Page 1)

Center Operations. In 1980 he became Center Operations head.

Huffstetler joined NASA in 1962 and became chief of the Project Engineering Branch at JSC in 1972. In 1977 he became deputy chief of the Life Sciences Project Division, managing Skylab flight experiments. In 1978, he became manager of the space shuttle Payload Systems Integration Office, and in 1982 manager of the Mission Management Office with responsibility over space science experiments and payload design, development and operation. He represented JSC on the Space Commercialization Policy Task Force, and in 1986 was appointed assistant to the director of Engineering. In 1988 he was named to head the newly created New Initiatives Office.