



Space News Roundup

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No. 18

Mir crew gets ready for first of four space walks

Work transforms space station for *Atlantis*' arrival | Fix is in for quail egg physiology experimentation

On board the Mir Space Station, cosmonaut-researcher Norm Thagard and his two crewmates, Commander Vladimir Dezhurov and Flight Engineer Gennadiy Strekalov are preparing for next Friday's planned space walk, the first of four extravehicular activities to ready the orbiting space station for the arrival of *Atlantis* in June.

Dezhurov and Strekalov are checking out their space suits, umbilicals and tools, and also beginning some special exercises designed to condition their arms and hands for the demanding work of the space walk.

"We are doing some evaluations of Vladimir

and Gennadiy's strength levels for the upcoming space walk," Thagard said during Wednesday's televised status report. "Basically, they are using the exercise bicycle as an upper body exerciser in preparation for the EVA."

In what Thagard described as a "run until exhaustion," Dezhurov and Strekalov pedal the bicycle using their upper bodies, allowing doctors on the ground to evaluate their physical condition.



Please see **MIR**, Page 4

Scientists have taken the first steps toward understanding how microgravity affects the development of birds with the successful "fixing," or preservation, of fertilized quail eggs aboard the Russian space station Mir.

The eggs are part of a group of eggs launched aboard a Russian Progress transport vehicle earlier this month and then transferred to Mir. Crew members will fix the remaining eggs at later stages of

development before they hatch.

The preserved eggs will be returned to Earth aboard *Atlantis* as part of the STS-71 mission. A second group of fertilized quail eggs is scheduled to be transported to Mir later this year.

The quail experiment, known as Incubator II, is one of the basic biology experiments being conducted as part of the shuttle/Mir science program. Gary Jahns, Ph.D., is the shuttle/Mir payload manager at Ames Research Center.

"The primary objective of the 11 principal investigators is to answer key questions about Please see **EGGS**, Page 4

AIAA offers technical station look

Construction of the International Space Station will be the focus of the American Institute of Aeronautics and Astronautics 20th annual Technical Symposium this month.

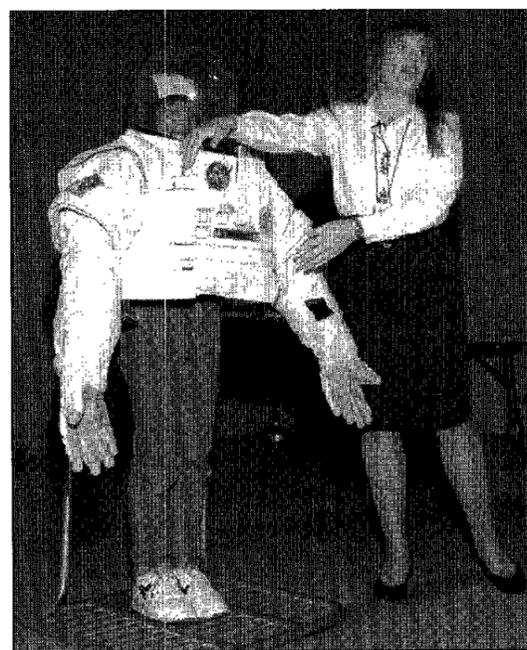
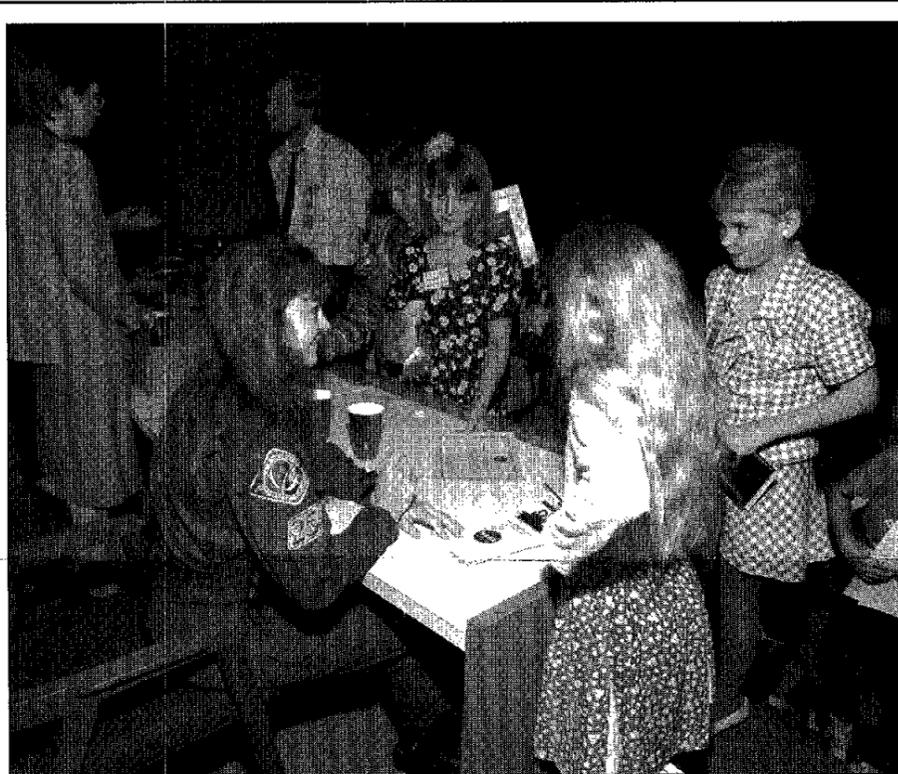
The AIAA's Houston Section will host the symposium from 8:30 a.m.-4:30 p.m. May 19 at the Center for Advanced Space Studies, 3600 Bay Area Blvd.

Dr. Kamlesh Lulla, vice chairman of the Houston Section, said the symposium is designed to provide an opportunity for the local aerospace community to obtain the most up-to-date information about the space station program.

This year, the program committee has organized four panel discussions that will cover vehicle assembly, space walks, international partners, and science and technology issues that relate to the International Space Station Program. Speakers will include Space Station Program Manager Randy Brinkley and Deputy Manager Bill Shepherd, Vehicle Office Manager Doug Cooke, Vehicle AIT Office Manager Dale Thomas, Operations Office Manager Chirold Epp, Utilization Office Manager Michelle Brekke, Safety and Mission Assurance Office Manager Harold Taylor, Research Management Office Manager John David Bartoe and International Partners Manager J. Craig Stencil.

The gathering also is designed to provide a forum for local aerospace professionals to present their work without the expense of travel required by other meetings. The four general technical sessions will cover other topics of interest.

Registration, which includes lunch, is \$3 for AIAA members, \$5 for non members. Reservations are needed for lunch only; call Tanya Bryant at x31175 or Sara Leggio Follett at 282-3160. For details, contact Lulla, x35066, or Brenda Ward, x47563.



DAUGHTER DAY OVERFLOW— So many parents brought their daughters to work as part of the Take Our Daughters to Work project last week that they overflowed Teague Auditorium. The program is designed to introduce girls age 9-15 to career opportunities. Above: Astronaut Tammy Jernigan signs programs for some of the 450 daughters who visited JSC on April 27. Left: Gretchen Thomas of Engineering's EVA and Space Suit Systems Branch explains the workings of the extravehicular mobility unit with the help of a space-suited daughter.

JSC Photos by Jack Jacob

Discovery gets next orbit date

The Space Shuttle *Discovery* was moved from its maintenance hangar at the Kennedy Space Center to the Vehicle Assembly Bldg. last week as the STS-70 mission moved into the slot for the next shuttle launch on a mission to deploy a large NASA communications satellite.

Once it arrived in the VAB, *Discovery* was mated to its solid rocket boosters and external fuel tank for its targeted liftoff June 8 at the opening of a 2 1/2 hour launch window at 8:01 a.m. CDT. A firm launch date will be set at the traditional flight readiness review May 26.

The decision to move *Discovery's* flight ahead of *Atlantis'* launch on STS-71, the first flight in which a shuttle will dock to the Russian Space Station Mir, was designed to make the most efficient use of NASA's workforce and Shuttle processing resources and to optimize the launch schedule for missions later in the year.

STS-70 Commander Tom Henricks, Pilot Kevin Kregel and Mission Specialists Nancy Sherlock, Donald Thomas and Mary Ellen Weber will spend five to eight days in orbit. The crew will launch the newest Tracking and Data Relay Satellite a little over six hours after liftoff and conduct a variety of secondary experiments in the 100th human space flight in U.S. history.

The TDRS satellite was moved to the launch pad last Monday night for installation in *Discovery's* cargo bay on May 13. The exact duration of the mission is expected to be decided about a week before launch after NASA managers assess the progress of work being conducted in orbit by two Russian cosmonauts and U.S. Astronaut Norm Thagard to prepare Mir for *Atlantis'* arrival. NASA wants to launch *Atlantis* at the earliest possible date on the STS-71 mission once a series of space walks and science module rotations has been completed to reconfigure Mir for *Atlantis'* docking.

Atlantis is currently targeted for launch June 24, but the date could be moved up a few days if work aboard the Mir proceeds on schedule. A firm launch date will

Please see **SHUTTLES**, Page 4



JSC workers get chance to take stage at Space Center Houston

By Eileen Hawley

JSC employees have the opportunity to take center stage at Space Center Houston this summer by volunteering their time and expertise at the visitor center.

The volunteer program, begun at Space Center Houston in January, now is being expanded to encourage current JSC employees to share their personal insights and expertise with guests at the visitor center. Volunteers are classified as either "on-stage" as in the case of mission briefers or greeters, or "backstage" for wardrobe or office workers.

"This is definitely a fun way to give our guests a very personal experience during their visit," said Amanda Tutt, human resources administrator at Space Center Houston. "JSC's employees have a unique perspective on our human space flight program and this program will give them a chance to share their own enthusiasm for NASA's achievements with our visitors from all over the world."

JSC volunteers would be a welcome addition for several special events

Space Center Houston has planned for this summer. In July, Space Center Houston will pay special tribute to Charles Schulz's contributions to American culture with a special exhibition of Peanuts comic strips. The exhibit, "Around the Moon and Home Again: A Tribute to the Art of Charles M. Schulz" begins July 1 and runs through Sept. 17.

With the release of Ron Howard's much heralded Apollo 13 film set for June 30, Space Center Houston will showcase pieces from the movie set as well as some actual Apollo 13 space flight hardware. That exhibit begins July 13.

"Space Day" on July 20 will kick off with the LEGO Space Challenge. The official Space Challenge, a year-long national model design and building contest. More than 200 area children will use their imaginations and LEGO pieces to create a space station, space shuttle, or alien creature.

Volunteers are needed for these events, and throughout the year. For additional information, or to receive a volunteer information packet, contact Space Center Houston's human resource department at 244-2150.



Space Center Houston is looking for a face in the crowd—actually, a lot of faces in the crowd—to support production of its 1995 television commercial.

JSC employees are invited to spend their lunch hour as "extras" in the commercial at noon Tuesday in SCH's Plaza. Extras will receive one complimentary ticket and a sandwich. Employees may join in the commercial shoot on their lunch hour or annual leave as work schedules allow and with the approval of their supervisor.

Interested employees should call SCH's Marketing Department at 244-2142 by Monday and bring their badges Tuesday.

5-5-95

JSC

34-10

7-100

7-100

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.

- Mystery Dinner Theater:** 7 p.m. May 5 at the Gilruth. Tickets cost \$18.50.
Galveston Home Tour: May 6, 7, 13 or 14. Tickets cost \$13.75.
World Championship Ice Skating: 8 p.m. June 15 at the Summit. Tickets cost \$30.50 for upper prom, \$45.50 for lower prom.
Loving Feelings Concert: 7 p.m. Sept. 30 at the Summit. Tickets cost \$32.50.
Schlitterbahn: Tickets cost \$17.80 for adults and \$15.30 for children 3-11.
Seaworld: Tickets cost \$23.50 for adults and \$16.25 for children 3-11.
Astroworld: Early bird tickets cost \$14.70. Season passes cost \$45.50.
Six Flags: Tickets cost \$23.70 for a one day pass, \$31.75 for two day pass and \$20.30 supersaver not valid on weekends in June July and August.
Fiesta Texas: Tickets cost \$20.35 for adults and \$15.80 for children 4-11 and senior citizens over 55.
Moody Gardens: Discount tickets for two of three different attractions: \$9.50
Space Center Houston: Discount tickets, adult, \$8.75; child (3-11), \$7.10.
Metro tickets: Passes, books and single tickets available.
Movie discounts: General Cinema, \$4.75; AMC Theater, \$4; 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.
Upcoming events: Splashtown tickets available soon.

JSC

Gilruth Center News

- 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.
Weight safety: Required course for employees wishing to use the weight room is offered from 8-9:30 p.m. May 9 and 25. Pre-registration is required. Cost is \$5.
Defensive driving: Course is offered from 8:15 a.m.-3 p.m. Saturday. Next class is May 13. Cost is \$19.
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. Tuesdays and Wednesdays. Cost is \$25 per month. New classes begin the first of each month.
Country dancing: Beginners class meets from 7-8:30 p.m. Mondays; intermediate class meets from 8:30-10 p.m. Mondays. Partners are required. For additional information, contact the Gilruth Center at x33345.
Ballroom dancing: Cost is \$60 per couple. For additional information call the Gilruth Center at x33345.
Sailing class: NASA Sailing Club will hold classes from 9 a.m.-noon Saturdays from May-June. For more information call Richard Hoover at 996-7716.
Golf lessons: Golf lessons will be given at the Clear Lake Golf Course. Cost is \$100 for six weeks of lessons.
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.

JSC

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 run only once. Send ads to Roundup Swap Shop, Code AP3, or deliver them to the deposit box outside Rm. 147 in Bldg. 2. No phone or fax ads accepted.

Property

- Sale: League City, 11.5+ acres, 669.72' on FM 270 extension between Webster & Austin St., cleared, clean, fenced, \$300k. 554-4316.
 Sale: 290 & Huffmeister, 3-2-2A, new carpet, paint kitchen, CF, deck, assumable \$393/mo; possible trade for equity, \$65k. 992-3662 or 286-3161.
 Sale: San Leon, herb farm, 2.5 acres, 3-2, new 16x80 mobile home, 30x50 green house, 30x30 gar, large pond, fenced. 333-6277 or 339-3562.
 Rent: Galveston condo, furnished, sleeps 6, Seawall Blvd & 61st St, wkend/wkly/dly rates. Magdi Yassa, 333-4760 or 486-0788.
 Rent: Arkansas Cottage on Blue Mt Lake, stone FPL, \$250/weekly or \$50/dly. Corcoran, x33005 or 334-7531.
 Sale: Egret Bay Condo, 2-1-2CP, 2 storage closets, FPL, W/D, all appliances, new carpet/tile/roof, boat launch, \$45k. x41036 or 333-4577.
 Rent: El Dorado Trace Condo, 2-2-CP W/D, wet bar, ceiling fans, 1100 sq ft, security, \$525/mo. Vicki, 960-9650 or 786-6888.
 Sale: Baffin Bay, 150' water frontage, 200' pier, 1.75 acres, 7 room house. 409-244-0312.
 Lease: Meadowgreen, 3-2-2, new carpet and D/W, well maintained, avail 6/1, \$950/mo + dep. x40124 or 480-9436.
 Sale: Webster, 3-2-2 w/pool, newly painted inside & out, new carpeting, \$67.5k. 332-4608.
 Sale: Sargent area, on Caney Creek, 2-1, extra large den. 409-244-0312.
 Sale: Seabrook, 4-3-2, new roof/paint, large yard, trees, \$85k. 409-925-8869.
 Lease: Pipers Meadow, 3-2-2, new carpet and paint, sunroom, FPL, avail 6/1, \$850/mo + dep. x40124 or 480-9436.
 Sale: League City, 3 bedroom house, 3 acres, barn, pond, beautiful setting, \$130k. 554-6138.
 Rent: Cabin, Lake Travis, private boat dock, central A/C & heat, furnished, sleeps 8, spring/summer, \$550/\$650 w/ky, \$120 dly. 474-4922.
 Lease: Clear Lake Shores, 2-1-CP, study, oak floors, quiet, near water, \$700/mo. 538-1849.

Cars & Trucks

- '82 Porsche 928, sunroof, auto, leather, 93k mi, looks & runs great, \$9.8k. Tom, x33651 or 280-8084.
 '80 Dodge custom van, built-ins, oak accents, loaded, low mileage, extended warranty, \$12k cash. Diane, x47129.
 '88 GMC PU extended cab, long wheelbase, SLE

- package, 5.7 Liter w/OD, P/S, P/W, A/C, AM/FM/cass, tonneau cover & toolbox, new tires/brakes, ex cond, 99k mi, \$8.5. 333-6277 or 339-2773.
 Honda Accord LX, 4 dr, auto, A/C, power, \$4,850. 488-7771.
 '84 Nissan 300ZX Turbo, ex cond, 5 spd, T-tops, loaded, new A/C, \$3.4k obo. 480-1767.
 '86 Pontiac Fiero 2M4, gold, auto, AM/FM, 80k mi, good cond, runs great, \$4k. David, x34700.
 '83 Subaru GL wagon, AM/FM/cass, P/W, interior ex cond, needs minor repair, new battery/tires, \$900 obo. 334-4313.
 '66 Olds Dynamic 88, 132k mi, need some work, but runs good, \$2k obo. 486-8963.
 '94 Chevrolet Silverado stepside, 86k mi, auto, complete ground effects. x48642 or 485-0900.
 '84 Cutlass Brougham, ex cond, \$1.6k obo. J.C., 616-9149.
 '54 Buick Special, 4 dr, 43k mi, excellent, a classic. Gene Cernan, 827-9922.
 '93 Nissan Sentra XE, 4 dr, standard, all power options, 22k mi, \$9.5k nego. Dilhar, 488-2549 or 480-3233.
 '93 Pontiac Grand Prix SE, 1 owner, very clean, new tires/batt/alternator/brakes, tinted windows, PW, PDL, \$11.9k obo. 955-9014.
 '85 Toyota Cressida, low mileage, extra nice car, \$3,650. x30750 or 585-8162.
 '77 Pontiac Bonneville, 110k mi, engine in great shape, body needs work, \$3k obo. 332-4608.
 '86 Camero, V8, red, power equipment, runs & looks great. Ken, x48267 or 474-3500.
 '77 Buick Park Avenue, loaded, A/C, \$900 obo. Glenn, x38067 or 480-7019.
 '80 Volkswagen Jetta, 5 spd, runs good, needs body work, Alpine stereo/cass, \$600. Jenny, x47583 or 538-2675.
 '89 Bronco II XLT, 73k mi, V6, 5 spd, A/C, power, AM/FM/cass, \$6k. x34744 or 482-3428.
 '85 Mazda 626, runs & looks great, AM/FM/cass, reliable. Ken, x48267 or 474-3500.
 '90 Plymouth Laser RS Turbo, 55k mi, 5 spd, red, \$7.5k. 333-6007 or 991-4377.
 '86 Mitsubishi Montero, good body, 5 spd, 4 WD, needs 2.6 engine, make offer; 4x9 utility trailer, \$350 obo. 339-3580.
 Travel trailer, 25' Avion, good cond, \$2,850. 554-6138.

Cycles

- '81 Suzuki 400 GS motorcycle, low miles, \$650. x34908 or 409-925-7224.
 '85 Yamaha Maxium XJ700N, good cond, 32k mi, \$800 obo. x46349 or 486-1602.
 '86 Kawasaki Ninja 1000R, 17k mi, red/black, ex cond, original/no modification, new rear tire/chain & sprocket, tuneup, \$3.5k. x37363.

Boats & Planes

- '88 Invader, 210 cuddy cabin, I/O 200 hp Merc, galvanized trailer, loaded great cond. 997-6141.
 Laser 2 sailboat w/trailer, spinmaker rigged, trap,

JSC

Dates & Data

Today

Cafeteria menu: Special: meat sauce and spaghetti. Total Health: baked potato. Entrees: rainbow trout, liver and onions, beef cannelloni, ham steak, fried cod fish, Reuben sandwich. Soup: seafood gumbo. Vegetables: steamed broccoli, breaded okra, cut corn, black-eyed peas.

Monday

Cafeteria menu: Special: turkey and dressing. Total Health: herb flavored steamed pollock. Entrees: breaded veal outlet, chicken fajitas, steamed pollock, beef, French dip sandwich. Soup: beef and barley. Vegetables: Brussels sprouts, mixed vegetables, egg plant casserole, winter blend vegetables.

Tuesday

NMA class: The National Management Association will host a class from 6-9 p.m. May 9, 16 and 23 at the Gilruth Center. "Financial Strategies for Successful Retirement" is the focus of the 10 hour class. Cost is \$50 per couple for members and \$75 for nonmembers. For more information call Richard Hergert at 280-0444.

Cafeteria menu: Special: pepper steak. Total Health: barbecue chicken. Entrees: baked lasagna, pork chop and fried rice, turkey a la king, baked chicken, fried cod fish, French dip sandwich. Soup: black bean and rice. Vegetables: breaded squash, steamed spinach, baby carrots, navy beans.

Wednesday

Astronomy seminar: The JSC Astronomy Seminar will meet at noon May 10 in Bldg. 31, Rm. 129. An open discussion meeting is planned. For more information, call Al Jackson at 333-7679.

Toastmasters meet: The Space-land Toastmasters will meet at 7 a.m. May 10 at House of Prayer Lutheran Church on Bay Area Blvd. For additional information, contact Elaine

Trainer, x31034.

PSI meets: The Clear Lake/NASA Area Chapter of Professional Secretaries International meets at 5:30 p.m. May 10 at the Holiday Inn on NASA Road 1. For more information, contact Elaine Kemp x30556.

Cycle club: The Space City Cycle Club will meet for a 25-mile ride beginning at 6 p.m. May 10 at the University of Houston Clear Lake soccer field. For more information on this ride and weekend rides call Mike Prendergast at x45164.

Cafeteria menu: Special: Mexican dinner. Total Health: steamed pollock. Entrees: broccoli cheese quiche, spare ribs and sauerkraut, steamed fish, Reuben sandwich. Soup: seafood gumbo. Vegetables: Spanish rice, pinto beans, peas, broccoli.

Thursday

Airplane club meets: The MSC Radio Control Airplane Club will meet at 7:30 p.m. May 11 at the Clear Lake Park Community Bldg. For more information call Bill Langdoc at x35970.

Cafeteria menu: Special: hamburger steak with onion gravy. Total Health: baked potato. Entrees: corned beef, cabbage and new potatoes, chicken and dumplings, meat ravioli, French dip sandwich. Soup: broccoli cheese and rice. Vegetables: navy beans, cabbage, cauliflower, green beans.

Friday

Cafeteria menu: Special: tuna noodle casserole. Total Health: broiled chicken breast. Entrees: deviled crabs, broiled pollock, liver and onions, broiled chicken with peach half, Reuben sandwich. Soup: seafood gumbo. Vegetables: Italian green beans, cauliflower au gratin, steamed rice, vegetable sticks.

Saturday

FOD Chili Cookoff: The 17th

annual FOD Chili Cookoff will be from 9 a.m.-5 p.m. May 13 at the Gilruth Center. All JSC and contractor employees are invited. Tickets are \$3 until May 5, then \$4; the price includes a tasting kit and beverages. For tickets, contact Mission Operations or Flight Crew Operations division secretaries. For more information, contact Sandy Griffin at x31056.

May 16

NAT meets: The National Technical Association will meet at 6:30 p.m. May 16 at Texas Southern University School of Technology Rm. 316. For more information call Carrington Stewart at x31404.

May 17

Mechanisms symposium: The 29th Aerospace Mechanisms Symposium, hosted by NASA and Lockheed Missiles and Space Co., will be held May 17-19 at South Shore Harbour Resort and Conference Center. For more information call Dorothy Daigle at 333-7390.

May 23

BAPCO meets: The Bay Area PC Organization will meet at 7:30 p.m. May 23 at League City Bank. For additional information call Guy Thibodeaux at 333-5340.

May 24

NMA meets: The National Management Association will meet at 5 p.m. May 24 at the Gilruth. For more information call Kathy Kaminiski at x38706.

May 25

Radio club meets: The JSC Amateur Radio Club will meet at noon May 25 in Bldg. 16 Rm. 253. For more information call Larry Dietrich at x39198.

NASACOM meets: The NASA Commodore User's Group will meet at 7:30 p.m. May 25 at the Clear Lake Park Bldg. For more information call Glenda Souliere at x31764.

Swap Shop

- vests, \$1.2k. x41095 or 486-8185.
 '93 Seamaster 18.80, CC, P/T/T, 85 hp Yamaha motor, Bimini top, depth finder, galvanized trailer, low hours, ex cond, \$9.7 firm. 944-2138.
 Searay Bowrider, 18', 130 hp I/O, power trim/tilt, power steering, all options, ex cond, galvanized trailer, \$8.5k. 532-1673.
 Alpha 230A Windsurfer, 2 sails, 2 mast, ex cond, \$350. Lee, 282-3236 or 486-4894.

Audiovisual & Computers

- Mac II, 8 MB RAM, 130 MB HD, color monitor, mouse, software, \$650. 996-5739.
 Citizen printer, "CSX-140" w/GSX color option, \$225. Magdi Yassa, 333-4760 or 486-0788.
 486 DX2-80, 6 MB RAM, 2-330 MB HD, 2 FD, 3XCD, 14" SVGA, \$1.3k; 386 DX25, 8 MB RAM, 2-110 MB HD, 2 FD, 1XCD, sound, 14" VGA, \$575. x35549 or 554-7104.
 CADASH & Golden Axe full sz arcade coin operated video machines, action/adventure games, very good cond, \$325 ea or \$600 both. 538-1759.
 Quicken special ed for DOS, \$20; WordPerfect Mainstreet CD, \$25; Spiderman for Game Gear, \$20; X-Men for Game Gear, \$20; Smartball for SuperNintendo, \$15. x37130 or 334-4124.
 Mac SE computer, 4 MB, 20 HD, \$395. 488-7771.
 Commodore 128, disk drive, monitor/TV, software, \$150 obo; Atari 2600 games, obo; War-games, CarWars, best offer. 286-3172.
 286 Computer, 1 MB RAM, 40 MB HD, 5.75" FD, monitor, keyboard, \$175. 996-5739.

Photography

Meade 4" telescope, model 2045, Schmidt-Cassegrain table tripod & accessories in carrying case, \$500. Marie-France, x39309.

Musical Instruments

- Lowery Magic Genie organ, bench, headphones, lots of music. 480-0030.
 Peavy backstage 30 guitar amp, ex cond, \$125. Russ, 280-9461.

Pets & Livestock

- Sheltie/Border collie mix, puppies avail 5/8, \$50. x36814 or 554-2955.
 Sugar Gliders, cute, warm, small marsupials, 1 male, 2 females, \$500 nego. x34565 or 397-8388.
 Free kittens, tri-color. x48749 or 559-2764.
 Free kittens, born 3/15, white boots w/gray/black striped. Lore, x38477 or 476-1791.
 Brangus cattle, proven producers, bull, cows, calves. 409-925-8869.
 AKC Cocker Spaniel, 3 yrs old, black & white, w/dog house, \$250. 471-5428.
 Free purebred Weimereiner, 2 yrs old, excellent w/children. Kathy, x38193 or 409-267-3750.

Household

RCA color TV, solid wood console, 27", stereo sound, new \$950, sell \$650. x47129.

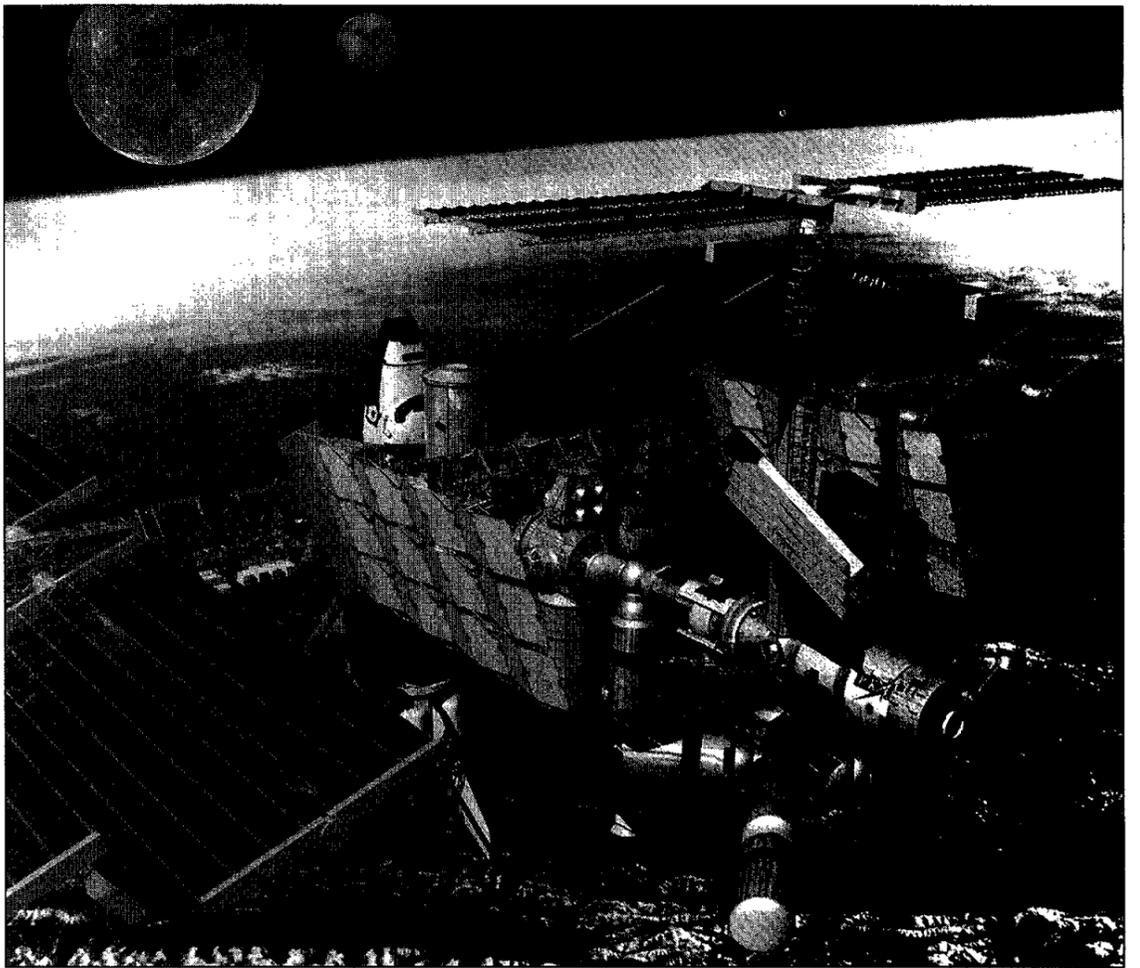
- Big Sur queen sz waterbed w/bookshelf headboard, ex cond, \$85 or trade for working VCR, 5 yrs or less. x37130 or 334-4124.
 Maytag W/D, large capacity, 2 spd, \$700 obo. Rita, x32686.
 King sz oak waterbed w/semi motionless matt, 6 drawers, headboard w/mirror & shelves, \$250 obo. 280-0285.
 Brown rattan living room set, 1 coffee, 2 end tables, 1 couch, 2 chairs, \$400. 471-5428.
 Queen sz mattress set, \$30; 25" RCA color console TV, works, \$75. Sam, 332-3168.
 Solid pine four-poster bed, new \$700 sell \$400. Vanessa, 282-4563.
 Queen sz semi motion waterbed w/6 drawers & bookcase headboard, \$90; loveseat, \$75; solid wood computer desk, \$40. Ben, 335-2431 or 482-6041.
 Hide-a-bed, 67", off white/tan, \$225; 2 end tables, \$25/ea. 488-1234.
 Papason chairs, 2, blue floral, \$40/ea; rocker, \$25; antique rocker, \$200; antique caboose wood/coal stove, \$200; old money safe, \$100. 482-1582
 White, Westinghouse window A/C, 5000 BTU, under warranty till '99, \$185. Khoi, x31727 or 282-6972.
 King sz waterbed mattress/heater, new \$350 sell \$100. x38243.
 Sofa and loveseat, dark blue w/floral pattern, good cond. \$175 obo. 538-1759.

Wanted

- Want personnel to join VPSI Vanpool departing Meyerland Park & Ride lot at 7:05 a.m. for JSC, on-site personnel working the 8 a.m. - 4:30 p.m. shift, Travis Moebs, x45765 or Don Pipkins, x35346.
 Want low priced school/work car or truck. 271-7011.
 Want personnel to join vanpool, departing Southwest parking lot at 6:50 a.m. for JSC & offsite locations, 7:30 - 4:00 p.m. shift. Susan Gaynor, 282-5447 or Ed Rangel, x36124.
 Want someone to clean house in Pearland once every other week on regular basis, reference requested. 997-2280.
 Want Dog kennel for large dog, approx 6'x12'x6'. x32264.
 Want roommate(s), 4-2.5-2, 2 story house in Seabrook, vaulted ceilings, fans, separate phone lines, W/D, \$350/mo. 474-4742.
 Want '91 Olds Cutlass 14" hubcap. 282-3479.
 Want anyone interested in Hatha Yoga. 480-9663.
 Want camping equipment, family size tent, stove, lantern, etc. x32264.
 Want Little Tikes, Fisher Price, or similar children's toys for ages, 2 & up, particularly large items. Jennifer, x37306 or 486-0177.
 Want fill dirt. 946-6814.
 Want pool table with slate top. Nelda, 333-7686 or 332-5641.
 Want reasonably priced hunting travel trailer. Nelda, 333-7686 or 332-5641.

Miscellaneous

- Two President & First Lady Charter Gold memberships, \$700 both or \$400 ea. Roger, x31928 or 996-7674.
 Monkey grass, 1 gal containers, \$2.50 ea or 5 for \$10. x30974 or 554-7083.
 Cross stitch materials, complete kits, bibs, patterns, frames, Laguna & Aida cloth, all sizes/all colors. Faye, 470-1455.
 Soloflex exercise machine w/leg & butterfly attachments, \$400 obo; Ping Eye 2 irons 2-SW, \$300 obo. Kevin, 331-1727.
 Sony home stereo CD player, dual cassette, surround sound, \$600; cast iron weight set, 220 lbs, \$115; Stairmaster, \$100. Eddie Pompa, x38813 or 489-7778.
 Wood chess table w/onyx board inset & onyx chess & checker pieces, \$50; 2 glass coffee tables, hexagon shaped, 17"x26" w/gold leaf base, \$50; 3-way lamp, green base, white shade, \$10; dark orange throw pillows, \$5. 474-3507.
 Engagement ring, 1.2 karat heart-shaped diamond solitaire set in 4-prong tiffany heart mounting, 6 mm polished 14kt yellow gold band, offered \$9.4k sell \$4k obo. Ken, 480-7018.
 Off-shoulder wedding dress, white short train, krenelin/veil included, sz 6, \$600; black leather car mask for Honda CRX SI, \$50; blue water resistant car cover for medium sz cars, \$40. Su, x45722.
 Remington 700-BDL 30-06 rifle, Leupold VA21-X 4.5 x 14 scope, base, rings sling, gun guard case, \$900; Gibson 335-S, case, \$450; Yamaha 12 string, case, \$400; Bronica S2-A medium format 6x6cm camera, 500mm, 7mm, 130mm, Nikkor lenses, \$800; Graphlex Super Graphic 4x5 view camera, 2 lenses, film holders, 4x5 enlarger, full darkroom setup. Kevin, 333-3703 x121 or 538-3141.
 Hitch, 2500 lb, 300 lb tongue weight, w/ball, \$75. Michael, 286-8060.
 Two President & first Lady Premier Plus memberships, valid, any club nationwide, \$1.6k value, both \$800. Debbie, x36276 or 332-4751.
 Rockets vs Utah tickets, lower prom, 4 tickets available, sold in pairs, \$30 ea. Gerald, x38835 or 482-5531.
 Baby crib w/matching double dresser, \$200; hi-chair; infant garage swing; play pen; umbrella stroller; Fisher Price play pen/crib; infant carrier; baby swing; other misc baby items. 282-4303.
 JC Penneys "Baby Dino" nursery set, comforter, bumper pad, headboard pad, dust ruffle, sheets, mobile, diaper stacker, roll of wall boarders, \$180. Kelly, 332-6701.
 One SW airline pass route anywhere Southwest flies, \$200. Barry G. Kazilas, x36325.
 Dolls, porcelain & vinyl, 5" - 8", babies in baskets, ex cond, \$10 to \$25 ea. 488-6521.
 Free miscellaneous pipe lengths; huge shop fan. Kathy, x38193 or 409-267-3750.



NASA's 1995 Strategic Plan

Plan moves closer to top-notch strategic management approach with specific goals, enterprises

[Editor's note: This is the first installment in a two-part synopsis of the highlights of 1995 NASA Strategic Plan prepared by the Public Affairs Office's PAO External Affairs Branch.]

The recently released 1995 NASA Strategic Plan moves closer to a top-notch strategic management approach for the agency by including specific goals for each enterprise and more detailed strategies for reaching those goals. Following is a quick overview of the main elements of the Strategic Plan.

nautics and space to fulfill our national needs. We will establish a permanent human presence in space.

As we pursue our mission, we will enrich our nation's society and economy by communicating our unique information to increase the public's knowledge, understanding, and application of science and technology. In the longer term, it is our goal to undertake bold and noble challenges... such as the return of humans to the Moon and human missions to Mars.

Vision, Mission and Goals

Vision

NASA is an investment in America's future. As explorers, pioneers, and innovators, we boldly expand frontiers in air and space to inspire and serve America and to benefit the quality of life on Earth.

Mission

It is NASA's mission to:
Explore, use, and enable the development of space for human enterprise.
Advance scientific knowledge and understanding of the Earth, the solar system, and the universe and use the environment of space for research.

Research, develop, verify, and transfer advanced aeronautics, space, and related technologies.

In fulfilling its mission, NASA contributes to America's goals in economic growth and security, preserving the environment, educational excellence, and peaceful exploration and discovery.

Goals

We will be at the forefront of exploration and science. We will develop and transfer to industry cutting-edge technologies in aero-

The NASA Team

NASA accomplishes its mission in partnership with large and small contractors, the science and academic community, other federal, state and local agencies, and other space agencies from nations around the globe. Together, these entities form a successful team that is dedicated to providing high quality, technologically superior products, and services to its customers. NASA's highly skilled diverse workforce and world-class facilities represent the backbone of our nation's civil research and development capabilities in aeronautics and space.

External Environment

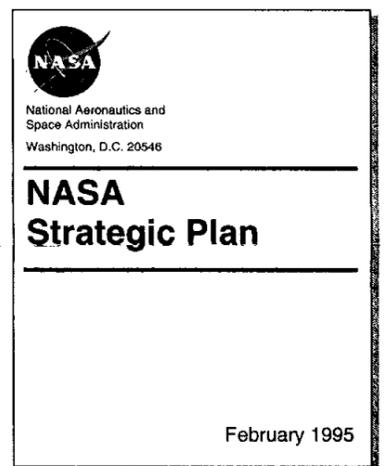
Assessment

The concept underlying the NASA Strategic Plan is our commitment to satisfying our external customers. Their interest and other external factors make up the external environment in which NASA operates. In the past few years, the environment has changed significantly. Four areas deserve particular attention in understanding the implications of these changes.

- **Foreign policy and national security concerns**
We will focus on a spirit of expanded cooperation with our traditional international partners and the forging of new partnerships. We have been asked to play a major role in international ventures with Russia.
- **Domestic policy priorities**
We will be required to ensure the relevance of our programs to national technology priorities and also to other domestic goals in areas such as the environment, health, education, aviation, and fundamental science.
- **Political support**
Continued political support will depend on our ability to play a role in addressing broad national needs and to deliver on our promises.
- **Public support**
Continued public support will depend on our ability to satisfy the nation's needs and to keep the public fully informed about our activities and about their relevance.

with national goals, carefully conceived, and well executed;

- be open and honest with one another and with our customers; and
- cooperate within and across organizations to deliver the highest quality results.



Key assumptions

This plan is based on a number of key assumptions. The following are examples:

- NASA's budget will remain flat or decline.
- NASA will continue to streamline its workforce and supporting infrastructure while meeting customer mission requirements at the lowest possible cost.
- Understanding Earth's environment will continue to be an important issue requiring NASA's leadership.
- The space shuttle will be maintained.
- NASA will have a major role in developing new low cost capabilities and more reliable access to space.
- International commitments will be honored.

Operating Principles

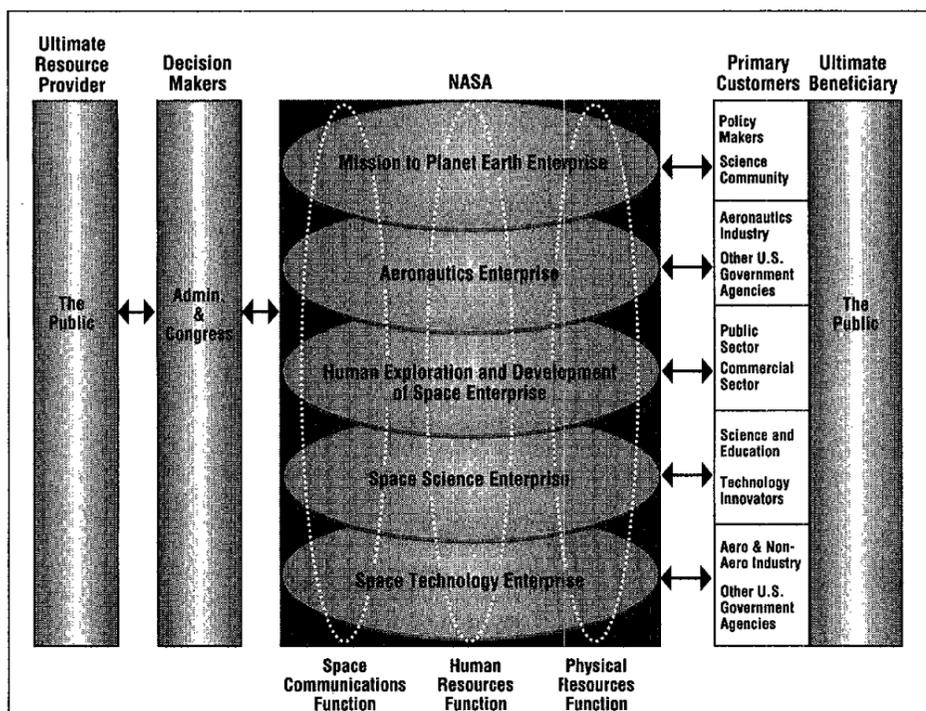
These will be reflected in the strategic plans of organizations and individual performance plans of NASA's managers and employees. Examples include:

- **Budget and Financial Management**
Foster openness, candor, and critical self-analysis.
- **Continual Improvement**
Promote excellence and continually improve processes, products, and services to better satisfy our customers' needs and requirements.
- **Environmental Stewardship**
Foster principles of compliance, restoration, prevention, and conservation.
- **Equal Opportunity and Diversity**
Promote equal opportunity, equity, and diversity in all that we do.
- **External Review**
Seek advice from external communities and evaluate program merit and priorities.
- **International Cooperation**
Highly value this integral element of our Nation's civil space program.
- **Safety and Mission Assurance**
Conduct programs to be international leaders in safety, quality, and mission assurance.
- **Technology Transfer and Commercialization**
Benefit the national and economic security of the U.S. through technology transfer. □

Values

Excellence is key to NASA's achievements. We will:

- aggressively recruit a team of highly qualified individuals from America's diverse cultures;
- encourage and reward creativity, initiative, and teamwork;
- provide training and valuable hands-on experience to develop our premier workforce;
- set high standards for leadership; lead by example;
- constantly seek ways to improve;
- ensure that our missions are consistent



Next week: Agency Framework and Implementing Strategy

NASA discontinues nozzle production at Yellow Creek

In a move that will save the Agency between \$450 to \$500 million through the year 2012, NASA on Tuesday directed Thiokol Corp. to discontinue work on construction of a solid rocket motor nozzle fabrication and refurbishment facility at Yellow Creek, Miss.

"This was a budget decision, pure and simple," said Space Flight Associate Administrator Wayne Littles. "NASA's been directed to reduce its budget significantly over

the course of the next five years, and we could not afford to complete the Yellow Creek facility. It would duplicate a capability we currently have in Utah, and would increase our costs significantly."

To reduce the impact to the Mississippi area, NASA is seeking to turn ownership of the facility over to the state of Mississippi and will provide a grant of about \$10 million to complete the site infrastructure and facilitate the transition to new

users. The grant would assist the state in providing security, general site maintenance and other services while locating tenants and finalizing plans for the site—a period estimated to be about five years.

"State officials we have met with are very supportive of this plan," Littles said. "We are certainly sensitive to the impact terminating this work will have on the local area. But if we implement this plan, Missis-

issippi will take title to a valuable economic asset capable of sustaining a wide range of industrial uses, and NASA will do everything it can to help the state find good tenants for this site."

Yellow Creek was to be the site for fabrication of an advanced solid rocket motor for the shuttle program. The ASRM project was canceled by Congress in October 1993.

To capitalize on the ASRM facility and equipment investment at the

site, Thiokol Corp. subsequently offered to relocate the solid rocket motor nozzle fabrication and refurbishment work from Utah to Yellow Creek. Currently, there are 90 people working at the Yellow Creek site.

The cost savings that can be realized by taking this action is based on reviews conducted by NASA's Office of Space Flight, the Office of the Inspector General and the Chief Financial Officer.



NASA Photo

The Space Shuttle *Atlantis* rolls over from the Orbiter Processing Facility to the Vehicle Assembly Bldg. atop the orbiter transporter. The move, which took place April 20, allowed *Atlantis* to be mated to its external tank and solid rocket boosters for the STS-71 mission. Its sister ship, *Discovery*, rolled over to the VAB on Wednesday for mating to the tank and SRBs that will be used on the STS-70 flight, no scheduled to launch June 8.

Shuttles head for adjacent launch pads

(Continued from Page 4)

be set at *Atlantis*' FRR on June 2.

Discovery is scheduled to be hauled to its oceanside Launch Pad 39B this week, marking the first time since 1992 that two shuttles will have occupied adjacent launch pads simultaneously in preparation for the start of their missions. *Atlantis* was rolled out to Launch Pad 39-A on April 26.

Discovery's crew will venture to KSC late next week for the terminal countdown demonstration

test, a dress rehearsal that will simulate the final hours aboard *Discovery* before liftoff. The countdown dress rehearsal for *Atlantis*' crew, led by veteran Shuttle Commander "Hoot" Gibson, will take place May 25.

Endeavour, meanwhile, is being readied for its flight in July on the STS-69 mission to deploy and retrieve the Wake Shield Facility and a SPARTAN science satellite. The 11-day flight, commanded by veteran Dave Walker, will also be

highlighted by a space walk to test mass handling capabilities and International Space Station construction techniques. Payload Commander Jim Voss and Mission Specialist Mike Gernhardt will conduct the six-hour excursion in *Endeavour*'s cargo bay.

The refurbished *Columbia* is undergoing routine processing for its September launch on the STS-73/USML-2 mission. *Columbia*'s 16-day flight is commanded by Ken Bowersox.

FOD Chili Cookoff open to all offices

JSC will host its 17th annual FOD Chili Cookoff from 8 a.m.-5 p.m. May 13 at the Gilruth Center, and for the first time the contest will be open to all JSC organizations.

About 30 teams are expected to compete for best chili, showmanship and people's choice trophies. At the cook-off, there will be games, skits and a space trivia contest for all team members.

FOD stands for Flight Operations

Directorate, which was divided into Flight Crew Operations and Mission Operations years ago.

In a return to those days gone by, showmanship once again will be judged on pre-cookoff propaganda and activities in which judges will expect displays of team spirit, unique flyers, unique dress, team skits and decorative storefronts.

Anyone interested in entering a

chili team may enter for a \$40 fee by calling Fran Camp, X39961. Any directorate or office may enter a team.

Tickets cost \$3 through today, \$4 thereafter and may be purchased by calling Mission Operations division secretaries or by calling Sandy Griffin, x31056. Ticket price includes beer, soft drinks and a tasting cup for all chili. For additional information call Griffin.

Mir crew plans space walk

(Continued from Page 4)

On this first extravehicular activity, the two will be preparing the worksite for activities to be concluded during a second EVA planned for May 17. They will ready the area of the Kristall science module by folding up one solar array and building a "catwalk" connecting the Kristall and Kvant-1 modules.

On the second EVA, the space walkers will move the solar array to the Kvant-1 module. This will allow Kristall to be rotated into position for the *Atlantis* docking. Thagard will support both of these scheduled space walks from inside the station.

Thagard is continuing to study the Mir environment as he and his crewmates end their seventh week on orbit. Last weekend, he used a sampler to test the air on Mir for post-flight analysis.

Monday, Dezhurov spent an hour in the Chibis suit, the Russian version of the Lower Body Negative Pressure device used on the shuttle.

"The idea here is to get into the device which creates a negative pressure in its lower half drawing fluids toward the lower portion of the body simulating the effects of gravity," Thagard said.

Thagard said he can detect a slight difference in his reaction to the LBNP compared to pre-flight.

"I think that what we may feel up here may be the result of lower fluid level in the body," Thagard said. "We'll get to test that hypothesis next week, when I do a fluid loading before my run in the Chibis and we'll see if that makes a difference. I think we're perfectly hydrated for a zero-g environment, but dehydrated in a one-g environment."

Space News Roundup

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Electronic mail messages should be sent to the editor, khumphri@gp301.jsc.nasa.gov or the associate editor, kschmidt@gp301.jsc.nasa.gov.

Editor Kelly Humphries
Associate Editor Karen Schmidt

Banquet to honor public service work

The Federal Executive Board/Federal Business Association will hold its annual Public Service Recognition Awards Banquet at the Gilruth Center from 11 a.m.-1:30 p.m. Wednesday, and six JSC employees will be honored.

Most Federal Agencies/Departments from across the Houston/Galveston area will be represented at the event, which provides recogni-

tion for their accomplishments and performance at work and in the community through volunteer activities.

The theme of this year's banquet is "Public Employee — Making America Work for You" and the keynote speaker will be Houston Astros owner Drayton McLane Jr.

For more information, call Helen Harris at x38413 or Teresa Sullivan at x38970.

Source evaluation workers receive special accolades

Terri Hesse, director of the Business Management and Scott Thompson, procurement officer, presented special awards last month to a group of employees for their outstanding performance as members of Source Evaluation Boards.

These awards were distributed from a special SEB award allocation received directly from NASA Headquarters. A total of \$10,400 was distributed among the SEB participants.

Award recipients and the SEB on which they participated are, Aerospace Ground Safety and Risk Management Support — Carol Homan, Donald Holick, Bobby

Martin, Herbert Noakes, Charles Riley and Susan Orlando. Logistics Support Services — Duane Emmons, Cecil Dorsey, Georgia Hurst, Susan Starkweather, Jose Garcia, Martha Cassens and Wayne Thomas

The awards are designed to focus attention on the importance of the SEB process by rewarding the individuals who are specifically designated to serve on SEBs. The responsibility of the SEB participants includes preparation of the Request for Proposal, evaluation of proposals, and presentation of the SEB findings to the source selection official for contractor selection.

Harris deputy chief engineer for aeronautics

Dr. Wesley L. Harris has been named deputy chief engineer for aeronautics, NASA Administrator Daniel S. Goldin announced last week.

Harris, formerly associate administrator for the Office of Aeronautics, will provide an independent technical review of NASA aeronautics programs and projects to

ensure they are being planned and conducted on a sound engineering basis with proper controls and management of technical risk.

Harris will report to the chief engineer within the Office of the Administrator.

Dr. Robert E. Whitehead is serving as acting associate administrator for aeronautics.

Slayton Memorial Golf Tournament set

Two local aerospace contractors from JSC will host the second annual Deke Slayton Memorial Golf Tournament at noon May 15 at the Bay Oaks Country Club.

This year's event, which benefits the American Cancer Society, is being organized by Per Barsten, Chuck Hairell and Tim Flannery of AlliedSignal Technical Services Corp.; Karen Todd of Barrios

Technology; Helen Chagwin of Clear Lake Regional Medical Center and Gene Mitchell of Rawson and Co. of Deer Park.

Players and organizations who want to participate should contact Barsten at x32123, Hairell at x36913, Flannery at x33108, Todd at 280-1816, Mitchell at 613-4613, Chagwin at 338-3250, or the country club at 488-9753.

Quail eggs get "fix" on Mir

(Continued from Page 4)

the effects of microgravity on avian development," Jahns explained. "From the beginning this was developed as a joint U.S./Russian experiment, with investigators from both countries sharing all samples."

Ames' Life Sciences Division developed special fixative containers and glove bags to provide three layers of containment for the potentially hazardous fixatives required by U.S. investigators. "This hardware allows the cosmonauts to work safely with much better fixatives than have been allowed on Mir in the past, enabling far more detailed analysis of returned samples," Jahns said.

Next year, plans for the experiment are more ambitious. "Current plans are to fly adult quail to Mir in March 1996," Jahns continued.

"The first group will include three female and one male quail. During the initial stages of the research, astronauts will put the eggs that we anticipate will be fertilized in space into an on-board incubator. Scientists will study the eggs at various stages of development," Jahns said. They will be returned to Earth either on the Space Shuttle or on a Soyuz vehicle.

"The hardware concepts developed and tested as part of the joint Shuttle/Mir project will be of great benefit to the development of future hardware being designed for the International Space Station," Jahns said. "In addition, using facilities on Mir will give U.S. researchers the unique opportunity to explore many areas of growth and development that have, to date, been unavailable to the U.S. research community."