



Space work

The STS-49 crew brought back some great photographs of their recent satellite rescue mission. Photos on Page 3.



Public servant

Kamlesh Lulla is one of three JSC employees who recently received Public Service Recognition Awards. Story on Page 4.

Space News Roundup

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No. 21

JSC's recycled paper could circle globe twice

By Kelly Humphries

The latest report on JSC's highly successful paper recycling effort shows that since it all started in October 1989, the center has recycled enough paper to circle the Earth two and a third times.

In spite of the overwhelmingly positive response to the recycling program, however, there are still a handful of people at JSC who can't, or won't break their old wasteful habits, said Mike Scott, the head of Center Operations' Special Purpose Maintenance and Services Office.

"Occasionally, we see trash cans with white paper in them or find recycle bins

being used to contain something other than paper, but most individuals have adapted to this effort very well," Scott said.

"For those who find excuses not to recycle, I wish they would think of a few basic facts," Scott said. "JSC produces about 3.6 tons of recyclable paper each and every day. It takes approximately 17 trees to produce an equivalent ton of that paper. That's 61 trees we're saving every day by recycling. Isn't that worth the tiny effort it takes to pitch in?"

Since the inception of the recycling

program, JSC has collected more than 3,500,000 pounds of paper, averaging a substantial 70 to 75 tons each month. That equates to saving some 30,000 trees and over 5,800 cubic yards of landfill volume since 1989.

Because society has become far more environmentally aware recently, paper recycling has caught on in a big way, Scott said. But the paper industry has not been able to keep up with the sudden conservationism. There are too few mills capable of processing recycled paper,

which has led to a paper glut that has driven the prices for recycled paper to about half as much as when the program began at JSC.

Even so, he said, JSC is still able to not only offset the costs of the recycling effort, but to partially fill the void left by recent budget constraints affecting custodial services.

Jo Kines, an environmental specialist, said the Environmental Services Office is helping look into the practical possibilities of purchasing and using recycled materials such as office paper. In addition to helping save more trees and other resources, the move will help JSC comply with federal regulations.



Earthwatch

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Columbia stacking is next week

By James Hartsfield

As *Endeavour* was readied for its ferry flight back to Florida, Kennedy Space Center crews were preparing *Columbia* for its move from the processing hangar to the Vehicle Assembly Bldg.

Next week, *Columbia* will be attached to its STS-50 solid rockets and fuel tank. *Columbia* is being prepared for a mid-June launch on STS-50, carrying United States Microgravity Laboratory-1 in the payload bay. The cargo bay doors were closed for the final time prior to the flight this week.

Technicians also tested the regenerative carbon dioxide system *Columbia* will use instead of removable filters for the longest shuttle mission yet, 13 days. In addition, more crew stowage was added in the crew cabin and sleep stations were installed to accommodate around the clock operations on STS-50.

The STS-50 crew — Commander Dick Richards, Pilot John Casper, Mission Specialist Bonnie Dunbar, Ken Bowersox and Carl Meade, and Payload Specialist Larry DeLucas and Gene Trinh — completed an equipment check of *Columbia* at KSC early this week.

Although *Endeavour* now has 3.5 million miles on it, the latest shuttle remained like new after its first flight, with little damage spotted after landing at Edwards Air Force Base on Saturday. It is to be ferried back to Florida as soon as weather permits.



Endeavour crew says teamwork crucial

By Kelly Humphries

The first crew of the Space Shuttle *Endeavour* returned home Sunday to a warm welcome at a damp Ellington Field after nearly nine days in orbit — more than a day of it performing space walks.

"From my perspective that was just an outstanding effort by everyone concerned," said Commander Dan Brandenstein. "Even though this one didn't go exactly as we planned it, we learned a heck of a lot. We didn't get some objectives accomplished, but we gained some objectives we hadn't even thought about or hadn't even written down."

Set up by Brandenstein's three rendezvous with Intelsat, Mission Specialists Rick Hieb and Pierre Thuot stepped outside *Endeavour* for three space walks with Mission Specialist Tom Akers joining them for the third, which turned out to be the longest space walk ever at 8 hours, 29 minutes, and the first three-person space walk.

The next day, Akers and Mission Specialist Kathy Thornton went outside for Assembly of Space Station by EVA Methods

tests and performed the second longest space walk at 7 hours, 45 minutes. Over the course of the flight, the four space walkers logged 25 hours, 27 minutes or 59 hours, 23 minutes in total human hours.

Through it all, *Endeavour* performed like a champ, Brandenstein added.

"The mission was planned as a team, we executed it as a team, now we'll go back as a team and review the data, and following that as a team we will make recommendations so that we can do our job better in the future," he said.

Pilot Kevin Chilton noted that the crew was so deep in talent that even the most difficult tasks became doable. He remembered that following the first and second unsuccessful attempts to capture Intelsat VI, there was a lot of soul searching going on. He said he found himself praying to St. Jude, the patron saint of lost causes.

"When I stopped and thought about it, I realized that St. Jude

Please see **CREW**, Page 4



At-risk fifth graders urged to 'go after' their math, science

About 600 fifth graders from some of Houston's most disadvantaged neighborhoods got a pep talk from two astronauts and toured parts of JSC Tuesday as part of the first HISD Space Day.

The speakers and tours were intended to encourage the students — who are considered to be at risk of dropping out of school because of their environment — to stay in school and beef up math and science skills that will help them find good jobs when they grow up and keep America competitive with other countries.

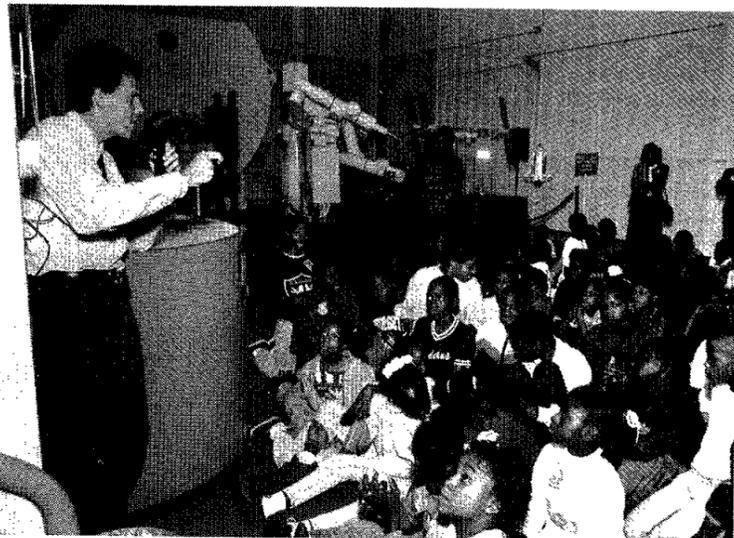
Astronaut Linda Godwin shared a film from her recent STS-37 mission, on which the crew deployed the Gamma Ray Observatory, and Acting Chief Astronaut Dick Covey urged the students to "go after" math

and science and learn the principles behind the machines we live with everyday.

"If there's a lesson that you all can learn in looking at what astronauts have done, it's that they all decided that they had an objective in what they wanted to do. They had a goal, and they didn't care if somebody told them they were different because they wanted to do that, or that they were strange because they wanted to study harder," Covey said. "Learning is important to you because it will determine what you are able to do with the rest of your life."

HISD Space Day was a joint project of JSC, the Houston Independent School District and 14 Clear Lake-area aerospace

Please see **COMPANIES**, Page 4



JSC Photo by Bob Walck

Houston inner-city fifth graders and their teachers listen intently to Geoff Waters, an Hernandez Engineering Inc. escort officer, during a visit to the Space Station *Freedom* mock-up area in Bldg. 9. The students were here as part of HISD Space Day.

Asian Pacific Americans to focus on unity

"Unity in Diversity" will be the focus of Heritage Day activities, sponsored by the JSC Asian Pacific American Program Council, today at the Gilruth Center.

The Heritage Day program began this morning at 8:30 a.m. with a workshop on "Cross-Cultural Communication" by Carol Archer from University of Houston's College of Business.

A luncheon will follow at 11:30 a.m. with Dr. Chiu-Nan Lai, director of the Land of Medicine Buddha, a center in Soquel, Calif., devoted to healing and promoting a healthy mind body and environment.

She is the author of "Unveiling the Oriental Mind" which is designed to help improve the

Please see **UNITY**, Page 4

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. For more information, call x35350 or x30990.

Fiesta Texas Park, \$19.50 (adult) and \$13.55 (child, 4-11).
Sea World, \$18.90 (child free with paying adult) and \$13.55 (child, 3-11).
Astroworld, \$16.95 and \$14.95 (child under 54 inches), \$44.95 (season pass) and Waterworld, \$9.50.
Six Flags, \$16.95 (one-day) and \$22.95 (two-day).
Movie discounts: General Cinema, \$4; AMC Theater, \$3.75; Loews Theater, \$4.
Upcoming EAA Events: River Raft Trip, July 11.

The JSC Employee Information Service has the latest word on what's happening at JSC. A recorded announcement, updated every day at 9 a.m., can be reached by calling **483-6765**.

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 is offered from 8-9:30 p.m. May 27. Cost is \$5.

Defensive driving — Course is offered from 8 a.m.-5 p.m. June 6. Cost is \$19.

Country and Western Dance — Course meets Mondays for six weeks beginning June 15. The beginner class meets from 7-8:30 p.m. The intermediate class follows from 8:30-10 p.m. Cost is \$20 per couple.

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

Aikido — Martial arts class meets twice weekly. Cost is \$35 per month.

Tennis lessons — Beginner lessons will be held Mondays beginning June 1. Cost is \$32. Beginner-advanced lessons will be held Wednesdays beginning June 3.

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

JSC

Swap Shop

Swap Shop ads are accepted from current and retired NASA civil service employees and on-site contractor employees. Each ad must be submitted on a separate full-sized, revised JSC Form 1452. Deadline is 5 p.m. every Friday, two weeks before the desired date of publication. Ads may be 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

Lease: Lake Travis cabin, private boat dock, central AC, fully equipped, accommodates 8, wkl/dly, \$425/85. 474-4922

Rent: Nassau Bay, room, non smoker, male/female, current residents are 1 male, 2 female and 1 dog, \$300 + util. 333-2827.

Lease: Univ Trace condo, 1 BR, study, 1-1/3 bath, W/D, 2 pools, blinds, fans, alarm, \$485/mo. 326-5607.

Sale: Meadowgreen Park, new section, 4-21/2-2, formals, lg kitchen, study, FPL, gas grill, new carpet, whirltub, garden, FHA assum, warr, \$127,900. 486-7747.

Lease: Piper's Meadow, 2-2-2, blinds, fans, gar dr opener, fenced, \$700/mo + dep. Tracy, x32526 or 486-3846.

Lease: Timeshare condo, Cancun Mexico, year-round, daily made service, full kitchen, can also exchange for location of your choice, \$450/wk. x37990 or x33185.

Sale: League City, Meadowbend, 4-2-2 split bdrms, 1918 sq ft, ex cond, custom windows, storage shed, landscaping. 538-1483.

Sale: Toledo Bend Lake, waterfront cottage, two lots, two docks and boathouse w/winch, 280' frontage, \$69K. 280-1579 or 482-5536.

Lease: Clear Lake, Oakbrook West, 4-2.5-2, both formals, family rm w/FPL, fans, fenced, no pets, \$985/mo. 488-5210.

Lease: Egret Bay condo, 2-2, cov parking, ex cond, \$595/mo. 283-0459 or 333-1038.

Sale: Sageglen, 4-2-2, new carpet, cathedral ceiling, track lights, fans, sec sys, CCISD/Pasadena, owner, \$85.9K. x37760 or 481-4190.

Sale: Friendswood, 4-2-2, new carpet, stained glass, custom curtains, screened patio, ceramic tile, vaulted

ceiling, approx. 1800 sq ft, ex cond, \$94.9K. x32905 or 482-9611.

Lease: League City, The Landing, 3-1.5-1, fenced, blinds, \$600/mo + dep. 486-9811.

Lease: Timeshare condo anywhere in the world, \$600/wk. 286-8417.

Sale: Countryside, 3-2.5-2A, 2-story, lg corner lot, cov deck, all bdrms up, int util rm, CCISD, \$66.9K. 554-7623.

Lease: Webster/Ellington, 2 BR condo, W/D conn, \$450/mo. Eric, x38420 or Herb, x38161.

Cars & Trucks

Terry Taurus Travel Trlr, 22', self contained, new uphol, AC/DC power, bath, refrig, \$2.2K; Rockwood popup camper, ex cond, new Coleman AC + tires, indoor/outdoor kitchen, icebox, 4 burner stove, sink, closet, sleeps 6-7, \$1.4K. x37242 or 943-7221.

'87 Audi Coupe GT, red w/blk leather int, 68K mi, \$5.5K. Mike, x36632.

'78 Porsche 924, 64K, 4 spd, red w/blk int, ex cond, \$3,695K, x35180 or 326-3706.

'91 Ford Ranger XLT PU, PS/PB/AC, 5 spd, AM/FM/cass, tinted glass, slider window, util box, bedliner, alum wheels, custom striping, bucket seats, 9K mi, \$7.5K. Bob, 338-9919.

'91 Chevy Storm, 3 dr, cobalt blue w/dark tinted windows, air bag, AM/FM/cass, AC, 12K mi. 286-1754.

'84 Grand Prix, runs perfect, ex AC and interior, \$2.5K OBO. 333-6059.

'79 Datsun 280ZX, new paint, 92K mi, \$2.2K, x37892 or 333-9518.

'77 Lincoln Mark V, good cond, one owner, \$2K or trade for truck or van. 796-0231.

'67 Mustang parts, good body, glass and misc, '68 Camaro sides and rear glass. 691-3333.

'88 Ford Ranger XLT, 40K mi, ex cond, 6 cyl, \$6K OBO. x33814 or 486-9760.

'91 Honda Civic DX, 3 dr hatchback, 5 spd, AC, AM/FM/cass, tint windows, 9K mi, \$9.5K. 333-7867 or 534-3437.

'74 Triumph Spitfire 1500 convertible, 77K mi, new top, tires, carpet, burgundy, runs well, \$2.8K. Will, x36050 or 334-4415.

'87 Mazda RX-7, turbo, red, sunroof, low mi. 488-7137.

'79 MG Midget, red, convertible, recent work, runs well, Weber carb, \$2,450. 286-5971.

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

Lunch and learn — The American Institute of Aeronautics and Astronautics' Materials, Structures and Dynamics Committee will present a lunch and learn meeting at 11:30 a.m. May 26 in Lockheed Plaza 1, Rm. 12C. Lockheed's Andrea Scott will discuss the Crew Equipment Translation Aid manual cart, which has been chosen as the prime unpowered space station transport alternative. For more information, call Tim Powell, 333-7311.

Expert systems workshop — JSC's Software Technology Branch and IBM Corp. are sponsoring a series of workshops on verification and validation of knowledge-based systems at the Gilruth Center. The next workshops will be from 8 a.m.-4:30 p.m. May 26 and May 28. For more information, call Chris Culbert, 283-8080; Bebe Ly, 283-8072; David Hamilton, 282-3857; or Scott French, 282-8346.

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

NMA meeting — The National Management Association will meet at May 27 at the Gilruth Center Ballroom. Program for the meeting will be a panel discussion on "Cultural Diversity in the Workplace in the '90s." The social hour will begin at 5 p.m. with dinner following at 6 p.m. For more information, contact Carol Turner, x34182.

BANN Meeting — Dr. Joanne V. Lichten, nutritionist and author, will be the guest speaker at the Bay Area NAFE (National Association of Female Executives) Network meeting at 11:30 a.m. May 27 at South Shore Country Club. For more information, contact Sharon Westerman at 486-8927.

Astronomy seminar — JSC Astronomy Seminar will be held from noon to 1 p.m. May 27 in Bldg. 31, Room 129. For more information, contact Al Jackson at 333-7679.

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

Thursday

IEEE videoconference — The Institute of Electrical and Electronics Engineers will present a videoconference on "Environmental Issues and Impact to Engineers" at 10:30 a.m. May 28 at the Gilruth Center. Presenters will discuss health and environmental issues and how they will affect the way electronic engineering is practiced. For more information, call Andy Lindberg at x31474.

SCS meets — The Society for Computer Simulation Bay Area Houston chapter will meet at 11:45 a.m. May 28 in Lockheed Plaza 3, first floor Pic Rm. McDonnell Douglas Space Systems Co.'s Donald Woods will discuss "Space Station Freedom: Embedding AI."

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.

May 29

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.

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.

DEF symposium — Langley Research Center and the American Institute of Aeronautics and Astronautics will host the Second Long Duration Exposure Facility Post-Retrieval Symposium June 1-5 at the Town & Country Hotel in San Diego, Calif. Concurrent sessions in radiation, meteoroids and debris, materials, systems and science will be offered for all interested people. For more information, call Arlene Levine at 804-864-3318 or 864-3782.

'91 Chevy Storm, 3 DR, cobalt blue w/dark tinted windows, air bag, AM/FM/cass, AC, 12K miles. 286-1754.

Boats & Planes

16' Prindle catamaran, colored sail, trlr, good hulls, all rigging w/trapeze seat, ex cond, \$1K. Joe, x35521 or 335-1549.

Sailboat, Dolphin 17' sloop w/main and jib, accessories, trlr, ex cond, \$1,650. 474-4136.

'88 Invader, 20' walkthru, 260 H.P., 5.7L Mercruiser, Tandem trlr, cass, SS Prop, all accessories, <100 hrs operated, \$11,399. 482-5294.

'88 Invader Sport 186, 125 hp, extras, ex fish or ski, \$8K. x31145 or 482-9275.

Cycles

Kawasaki EX 500 sportbike, ex cond, blk/red, 3K mi, alarm and lower faring, x38841 or 326-5446.

'81 CB Honda, runs + looks great, \$1K OBO. x33814 or 486-9760.

Audiovisual & Computers

HP 41CV calculator, \$65. 464-8694.

DOS software: Lotus 123 V.2.0, \$30; Norton Util V.4.5, \$30; MS Word V.4.0, \$50; MS Excel E.2.0, \$50, manuals incl. 480-7643.

Lobo Max-80 computer, 64K, CP/M or LDOS OS, 8" drive, Hayes Smartmodem, Epson FX-80 printer, some software, all hardware manuals, Gorilla mono monitor, \$200. Ronnie, 538-1649.

Panasonic computer w/mono monitor, 30MB HD, 2 drives, modem, graphic card, orig manuals, DOS installed, orig owner, \$657. 488-5564.

Amber mono video monitor, \$40; Amiga 1000 and 500, incl peripherals, documentation, books, and software, \$1.5K OBO, will sell separate. Speier, 333-2263.

Pets & Livestock

Blue Front & red Lored Amazon parrots, cages, tree and toys, \$650. John, x39418.

AKC lab pups, born 3/13. YLW. 1st shots/dew, claws, strong FTC bloodline, ready 4/24, \$200. 244-9682 or 534-2176.

Nanday Conure, very tame, handfed babies, \$125. 385-2715.

AKC reg red male daschhund, 2 yrs old, \$75. 337-1896 or 337-2682.

Blk tabby kitten, male, free to good home, 12 wks old. Beth, 283-5747 or 286-7322.

Need AKC male boxer to breed w/female in 2-4 mos. You get pick of litter. 474-2660.

Musical Instruments

Story and Clarke spinet piano, ex cond, \$700. 946-7587.

Household

Daybed, wht, 4 yr old, \$90. Mitch, x35481 or 486-0958.

Apt sz Kenmore portable W/D, 9 yrs old, 110V, avail 5/29, \$100. 282-6464 or 480-4554.

Wicker sofa, \$175; Rattan sofa, \$200; newly reuphol sofa, \$150. Paul, x34636.

King sz waterbed, complete, good cond, make offer. 332-1975.

Kenmore elec dryer, ex cond, \$75 delivered OBO. 464-8694.

Beige couch and loveseat; \$150 OBO; Early American wood coffee table and two end tables, \$150 OBO. x32168 or 338-2851.

Oak dining rm set, oval table w/two leaves and 6 chairs, hutch w/glass doors and shelves. 332-0330.

King sz bed complete, steel frame, matt/box springs, \$350; 120 sq yd carpeting, 2 yrs old, \$375; ornamental wrought iron bench, \$75; barometer w/humidity and temperature, \$10. 488-5564.

Table lamp, pleated shade, 3-way bulb, oyster color, \$20. x31260 or 488-2941.

Rattan LR set, 1 sofa, 2 chairs, 2 end tables, coffee table, lg microwave. 471-5428.

Antique style overstuffed chair, gray velvet, chaise lounge, dusty rose velvet, good cond, \$75 OBO. 538-3320.

Sofa & loveseat, good cond, \$175; set of ladies golf clubs, woods, irons, bag, sz 8 shoes, \$250. 532-2158.

Kitchen table, 36" x 60", solid wood, w/4 chairs w/cloth seats and back, ex cond, \$250 OBO. 480-5060.

Queen sleeper, floral pattern, thick cushion, was \$700, now \$300. Sue, x32996.

Lost and Found

Gold rope bracelet, bldg 1. Claranita, x31255.

Wanted

Want mature mother for inhouse day care of a 1 yr old baby girl, prefer

a Seabrook to Clear Lake location, will pay current day care fees. Claude, x37336 or 474-2700.

Want 14' Jon boat; repairable window AC units, Aubrey, x36580 or 339-1402.

Want patio table umbrella. Fred, 944-0493.

Want computer, 24 pin printer, and VGA monitor; 286 or 386 laptop/notebook. Norman, x38808.

Want CDs, Boston and Bad Company, ex cond, would like to trade. Tomas, 282-6902.

Miscellaneous

Sofa, dbl-sz sleeper, plaid design, fabric in fair cond, mech good shape, \$50; gutter attachment overhead rack w/ratchet-strap tie-down, \$20; rubber one-man raft, pump, paddles, \$15. Ronnie, x32539.

Skaters, why skate alone? Join the Suburban Animals. Mike, x36632.

DP AirGometer stepper, computerized w/pulse rate monitor, calorie count, variable air resistance, new ex cond, \$175 OBO. Kim, x49850 or 244-9699.

Sears Craftsman riding lawnmower, \$495; Mercury alum propeller, new, \$75. Andy, 332-9105.

Golf clubs, new perimeter weighted cavity-back irons, 3 PW, 3 "metal" woods, right-handed, \$275. Allen, x31188.

19' boat trlr, 2500 lbs, \$450. 534-2179.

Space Station Pilgrim model mint in box, 20 yrs old, \$15. 464-8694.

Lifestyler ski exercise, \$200; bike rack for car roof, holds 4 bikes, \$125; both ex cond. 334-4894.

'80 Chevrolet Chevette shop and wiring diagrams manual, \$15. Jack, x35337.

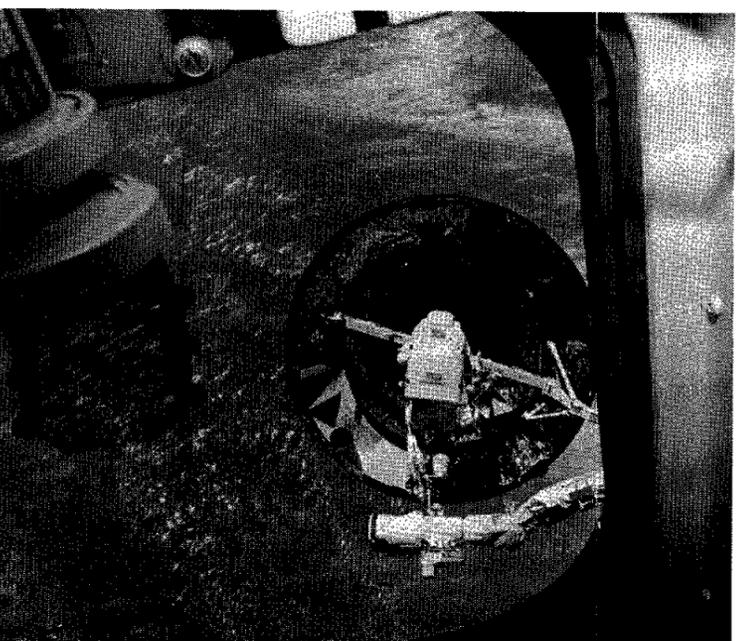
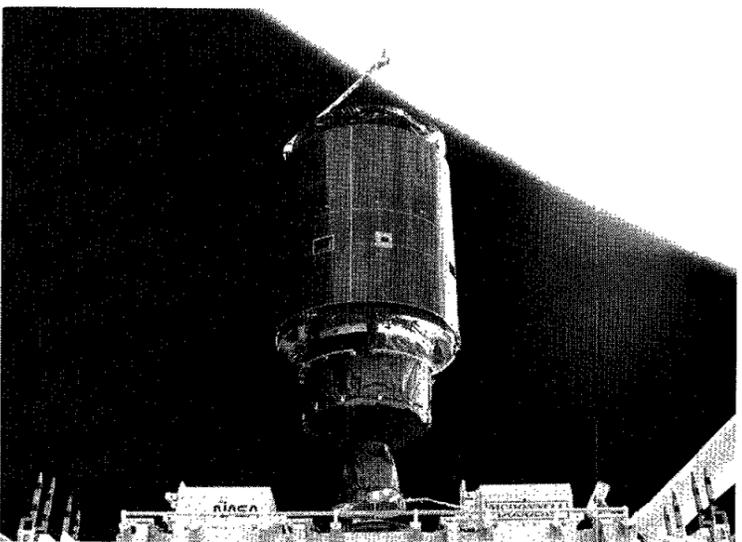
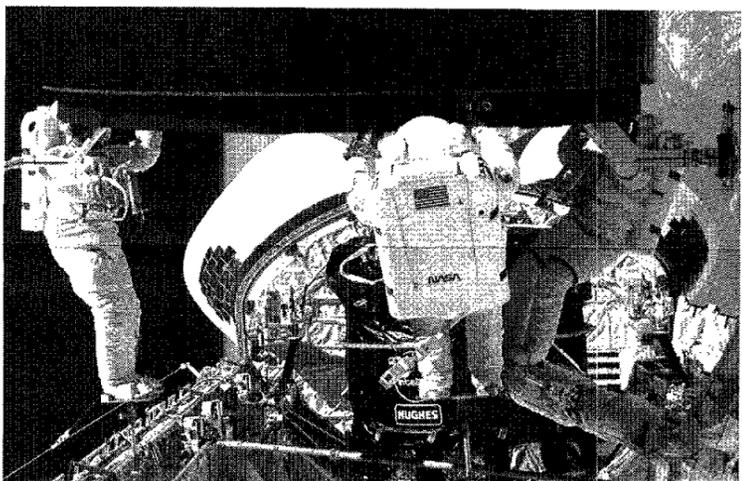
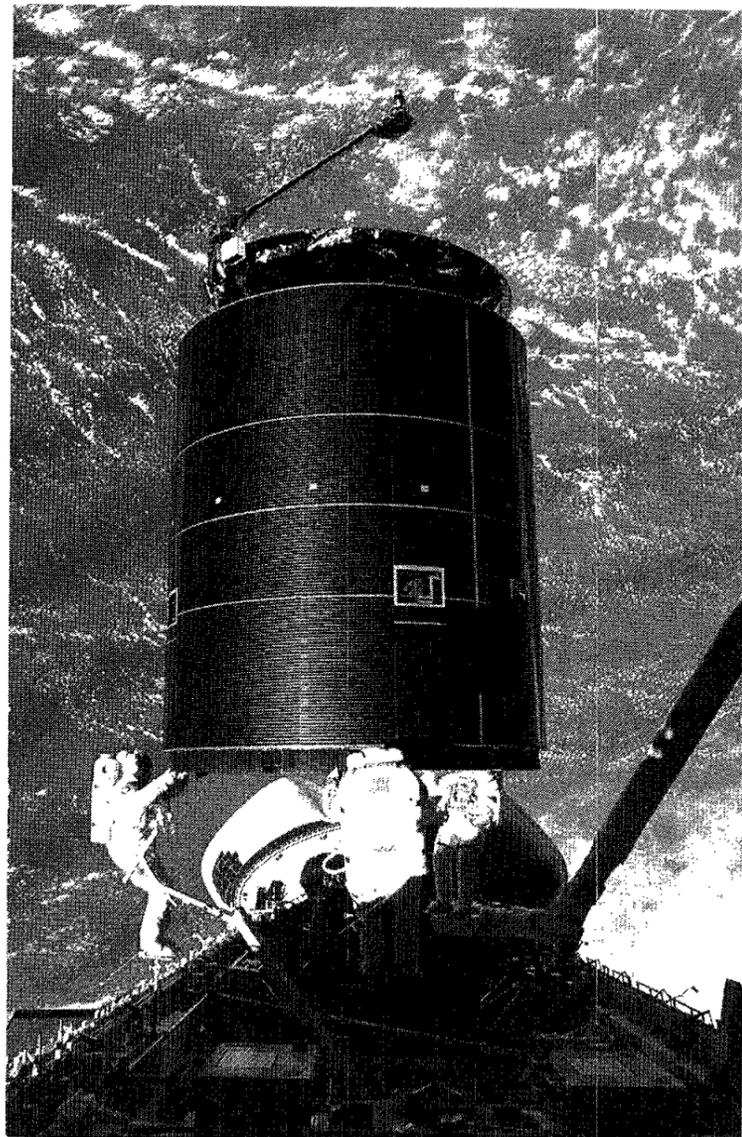
Lawnmower, 3.5 hp Murrah rearbagger, \$75. 280-0850.

One roundtrip flight coupon w/Southwest, expires 7/10/92, \$195 OBO. Eric, x39055 or 334-4770.

Boathouse winch, worm gearbox (50:1)/1 hp motor, 50' 1/4" cable, \$300. 280-1579 or 482-5536.

Five bundles (1-1/4 square), #1 cedar shingles, 2 bundles ridge shingles, \$85. Tom, x39179 or 488-3665.

Water skis, Connelly slalom SE wingtail/graphite, ex cond, \$125; EP ST-360 trickski, ex cond, \$75. John, 482-5837.



Another day, another EVA Records fall like dominoes on STS-49

Records fell like dominoes on STS-49. The crew of STS-49 made the first three-person space walk, the longest space walk ever (8 hours, 29 minutes), the second longest space walk ever (7 hours, 45 minutes) the longest female space walk ever (7 hours, 25 minutes) and the most space walks in one American space mission (four).

Counterclockwise from above:

1) The crew of the first flight of *Endeavour*, from left, Mission Specialist Pierre Thuot, Commander Dan Brandenstein, Mission Specialist Kathy Thornton, Pilot Kevin Chilton, and Mission Specialists Tom Akers, Bruce Melnick and Rick Hieb.
2) Hieb, Akers and Thuot, from left, use their gloved hands to capture the Intelsat VI satellite that had eluded Thuot and Hieb on two previous

attempts. The crew and flight controllers and engineers on the ground collaborated on the plan for the historic three-person space walk.

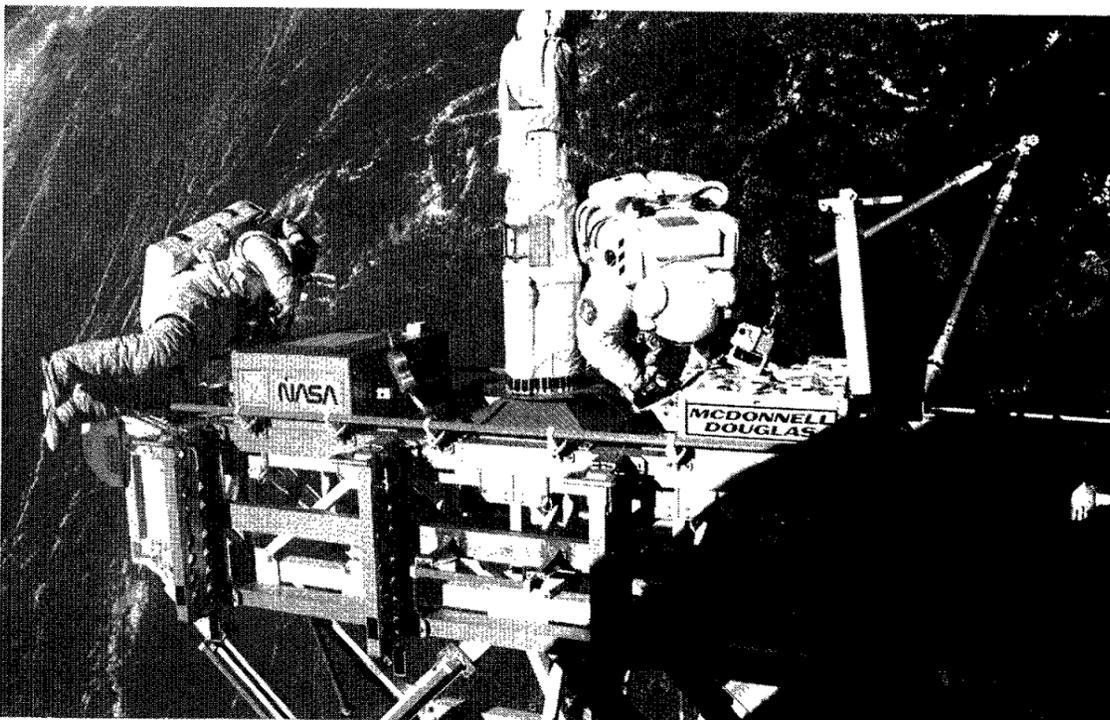
3) Hieb, Akers and Thuot, from left, attach a specially designed capture bar to the underside of Intelsat. After the capture bar was attached, Melnick grappled the capture bar and satellite with the robot arm and placed it atop its new perigee kick motor.

4) Intelsat and its new booster rise out of Endeavour's payload bay.

5) Thuot, his feet hooked into a portable foot restraint on the robot arm, makes his second attempt to capture the satellite with the capture bar.

6) Hieb stops by the aft window to say hello to Akers, on the flight deck.

7) Thornton, left, and Akers make the fourth space walk of the mission, working with the Assembly of Station by EVA Methods payload as it is lifted out of the payload bay by the robot arm.



Trio of flight controllers hangs STS-49 plaque

A trio of flight controllers earned the honor of hanging the STS-49 plaque in the Mission Control Center at the conclusion of the successful satellite rescue mission, said Lead Flight Director Al Pennington.

Cris Meyer, lead rendezvous officer, hung the plaque on behalf of the rendezvous team for its contribution to the success of the three rendezvous performed during the flight. Meyer's actions led to several important air-to-ground calls that preserved the capability to avoid Intelsat and make the final rendezvous attempt.

Mark Haynes, lead flight dynamics officer, represented his team for its contribution of providing the parameters necessary for completing the first ground-controlled rendezvous during the

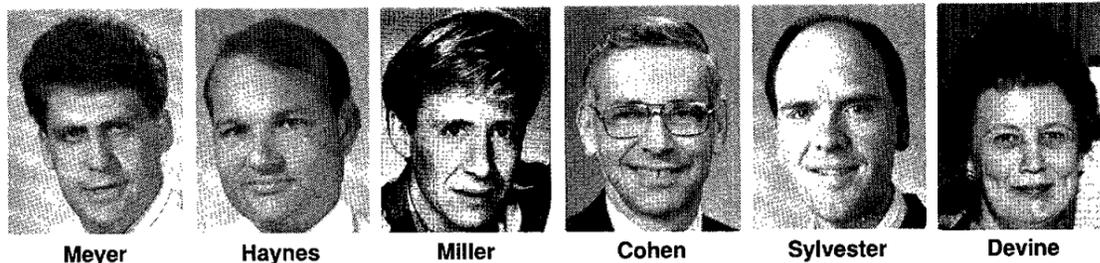
third and successful capture attempt. Jerry Miller, the Intelsat EVA officer, represented all of the space walk flight control team members who worked preflight to plan a triple space walk and in real time with the Team 4 "tiger team" that developed

the ultimately successful three-man capture attempt.

Cohen earns award for executive leadership

JSC Director Aaron Cohen will receive The American University's 1992 Roger W. Jones Award for Executive Leadership this fall.

The award, presented to senior career government officials for superior leadership that has resulted in outstanding organizational achievements and for strong commitment to the effective



Meyer

Haynes

Miller

Cohen

Sylvester

Devine

continuity of government, will be presented in the form of a bronze plaque and citation Sept. 22 in a ceremony at the university's Washington, D.C., campus.

The is named after a career civil servant and presidential appointee who worked in the old Budget Bureau, Munitions Assignment Board of World War II, Civil Service Commission, State Department, and Office of Management and Budget. He also was a consultant and adviser to four presidents.

Sylvester to direct AIAA Region IV

JSC's Andre Sylvester of Engineering's Automation and

Robotics Division has been elected Region IV director of the American Institute of Aeronautics and Astronautics.

Sylvester will serve a three-year term, directing the group's activities in the southwestern United States. He is the first JSC employee to become regional director in almost 20 years.

Sylvester was chairman of the AIAA Houston Section two years ago, and has served the regional and national offices of the organization in various ways.

Top secretary Devine coordinates leave transfer

Judith E. Devine recently received

the Marilyn J. Bocking Award for Secretarial Excellence.

Devine is secretary to the chief of the Human Resources Management Branch and the JSC coordinator for the Leave Transfer Program. In addition to coordinating her boss' schedule and correspondence, she coordinates the work of four section-level clerks supporting the branch's 35 people and supports the branch chief, who serves a dual role as deputy director of Human Resources.

In 1988, she assumed responsibility for coordinating all aspects of the Leave Transfer Program, which allows employees to donate annual leave to other employees who are in need.

People

JSC joins NMA in Management Week watch

The role of managers in America will be the focus of the 14th national observance of Management Week, June 1-6.

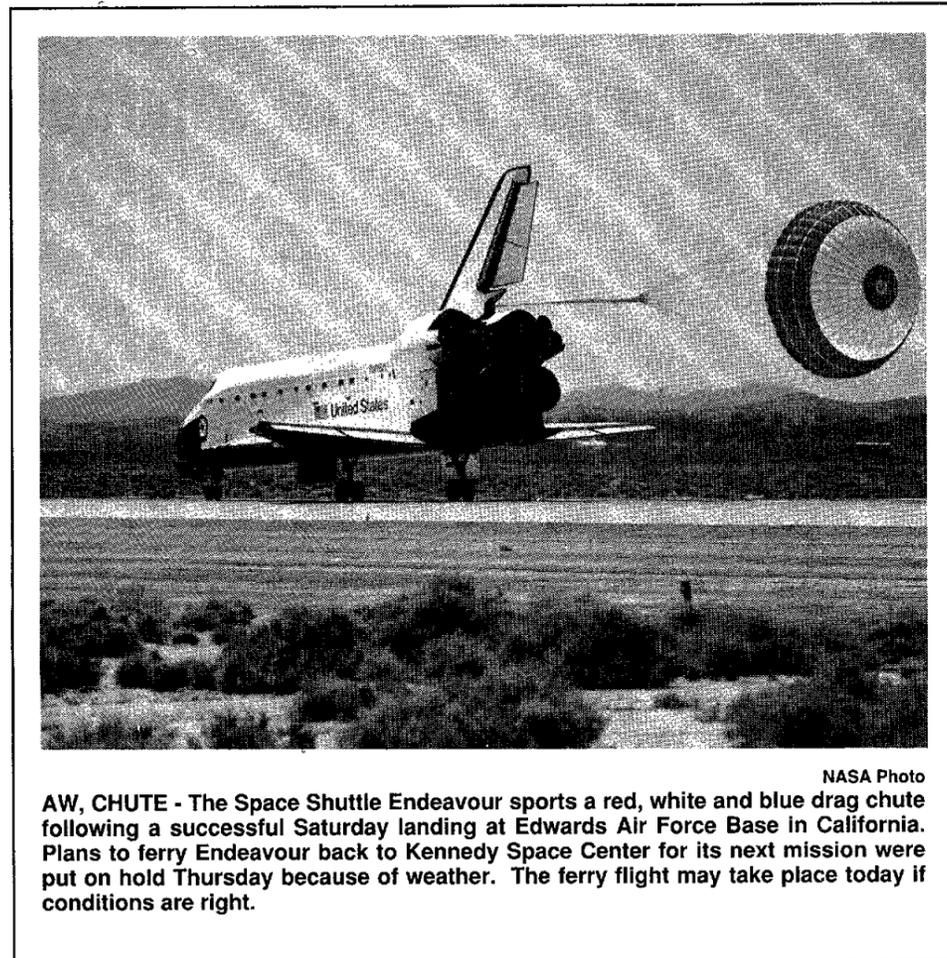
Sponsored by the National Management Association, Management Week seeks to recognize the role of managers in business and industry.

"I am pleased to have the Johnson Space Center join with the National Management Association in the observance of Management Week in America as an acknowledgment of the essential role of management both in the past and for the future of the center," said Acting JSC Director Paul J. Weitz.

"I am very proud of the competence and dedication at all levels of management at JSC as well as that of each and every employee."

As part of the local observance, Nassau Bay Mayor Gerald Allen signed a proclamation dubbing June 1-6 National Management Week.

NMA is a non-profit organization with 61,000 members nationally and 170 members at JSC. For more information, contact JSC Chapter President Grady McCright at x30541.



NASA Photo

AW, CHUTE - The Space Shuttle Endeavour sports a red, white and blue drag chute following a successful Saturday landing at Edwards Air Force Base in California. Plans to ferry Endeavour back to Kennedy Space Center for its next mission were put on hold Thursday because of weather. The ferry flight may take place today if conditions are right.

Crew says NASA family solved problem together

'Nothing feels better than being on a winning team'

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had quite a lot of help back here in Houston."

Hieb said the night after the first attempt to capture Intelsat was the most discouraging because the crew was not sure why the attempt hadn't succeeded. The night after the second attempt wasn't as bad because he and Thuot knew they had done exactly what they were supposed to have done and it still hadn't worked.

Chilton rallied the crew, he said, urging them to think of new approaches.

"What an opportunity to show what NASA can do when it really gets together as a family and says 'We can solve this problem.'" Hieb said.

Thornton echoed thanks to her

trainers, the STS-49 flight controllers and to the families of the crew for their support.

"I knew when I was assigned to this flight that it was going to be an exciting mission, but I had no idea how exciting it was going to be," she said. "It was all at the same time thrilling, frustrating, very disappointing and ultimately very successful. My heart is full of thanks to all of you."

Mission Specialist Bruce Melnick gave special thanks to the training team that help him prepare to run the robot arm that was so crucial to the Intelsat capture, as well as to the Assembly of Space Station by EVA Methods.

"I had the arm in places that we never even looked at, never even thought we

were going to have it on this flight," he said. "NASA is an operational team and we can do any mission that they send us out to try to accomplish."

Akers told the crowd of about 300 friends, family members and co-workers that they had played a big part in the success of the mission.

"Nothing feels better than being on a winning team, and that's due to the hard work of all of you."

Thuot agreed that the mission's success was due to the people at NASA, Intelsat, Hughes Aircraft and everyone else who played a role in its planning and execution.

"This was one exciting week," he said. "It was exciting enough to last me a lifetime."

Satellite grapppler Melnick accepts job in Florida

Astronaut Bruce E. Melnick, who operated the Space Shuttle Endeavour's robot arm during last week's rescue of the Intelsat VI satellite, is retiring from the U.S. Coast Guard and will be leaving NASA in July.

Melnick, a commander in the Coast Guard, has accepted the job of director for shuttle processing contract process improvement technology with Lockheed Space Operations Co. at Kennedy Space Center, Fla. He will be involved in the day-to-day processing of shuttle vehicles.

"I am really honored to have been a part of the NASA team for the last five years and certainly will miss the close friends I have made in the Johnson Space Center family," Melnick said. "My two opportunities to venture into space will provide me with irreplaceable memories for the rest of my life and should bring an invaluable experience base into my new position with LSOC at KSC. I am looking forward to taking on the challenges of space engineering management and family wise, this is an ideal time for us to make the move."

Melnick flew on STS-41 in October 1990 to deploy the Ulysses Jupiter probe and STS-49 in May 1992 to retrieve, repair and reboost Intelsat VI. He was selected by NASA in June 1987.

"Bruce has been an asset to the program, not only in his flight assignments but also in his technical assignments. He has represented the Astronaut Office at KSC in preparing the shuttle orbiters' cockpit and middeck for missions and in assembly and checkout of the new Space Shuttle Endeavour at contractor facilities in California. We wish him the best in his new job," said Flight Crew Operations Director Don Puddy.

Three JSC employees earn public service recognition

Three JSC employees were among the 240 civil servants recognized at the recent Federal Business Association's annual Public Service Recognition Awards luncheon at the Gilruth Center.

Dr. Kamlesh Lulla, of JSC's Flight Science Support Office, received the FBA's Professional Scientific Awards during the event, and Pete Strahl of the Printing Management Branch received FBA's Length of Service Award.

Paul Michael Joyce of the Electrical Systems Section of the Systems Division was nominated for FBA's supervisory award.

The award for Federal Executive of the Year went to Robert S. Trotter, regional commissioner of the U.S. Customs Service.

'Unity in Diversity' heritage focus

(Continued from Page 1)

understanding and relationships between Eastern and Western cultures. Lai also was a former Chinese translator for the Dalai Lama.

Lai's keynote address will be on "Harmony Generates Prosperity," a well-known Chinese saying.

The afternoon session, beginning at 1:30 p.m., will cover "Total Quality Management" with Peter L. Lange, senior consultant to KPMG Peat Marwick Management Consultants.

For more information, contact the Asian Pacific American Program Council.

Companies support HSD Space Day

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companies, including Rockwell, Bendix, Grumman, CAE Link, IBM, McDonnell Douglas, Digital, Computer Sciences, Loral, Boeing,

Barrios Technology, Paramax, Lockheed, Service America, Systems Management American, Honeywell and the Clear Lake Area Economic Development Foundation.

Space News Roundup

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

Editor..... Kelly Humphries
Associate Editor..... Kari Fluegel

New Secretarial Supply Catalog will include updates from stores catalog

The center's secretaries should be receiving some help in the form of a new JSC Secretarial Supply Catalog that's been updated.

The catalog, developed to help secretaries in ordering office supplies, has been updated to agree with the October 1991 issue of the Stores Stock Catalog.

The catalog contains three sections consisting of office supplies listed by colloquial names, supplies required for office machines and illustrations.

Secretaries are being asked to keep their cover and section dividers from the original catalog because new ones were not printed in an effort to keep costs down. The outdated material from the old catalog should be recycled, according to Joan Bellonby of the Center Operations Directorate's Logistics Division.

Secretaries who did not receive their updated catalogs or who do not have covers or dividers should call Bellonby at x36516, or Gail Carrington at x36677.