

JSC is preparing to batten down the hatches if this hurricane season produces a storm that strikes this area. Story on Page 3.



JSC's chapter of the National Management Association has given several of its members a pat on the back. Story on Page 4.

Space News Roundup

Vol. 31

June 12, 1992

No. 24

Goldin hosts total quality colloquium

NASA Administrator Daniel S. Goldin will host an agencywide, interactive Total Quality Management Colloquium on Tuesday.

Goldin is expected to share his philosophy regarding total quality management and continuous improvement, look at the TQM planning approach at NASA and reflect on his experiences while implementing TQM at TRW.

All JSC employees are encouraged to attend and participate in the colloquium, which will be from noon to 2 p.m. Tuesday in Teague Auditorium. Following his presentation, Goldin will spend about 30 minutes answering questions posed by those in the audiences at NASA Headquarters and the field centers.

"This is a wonderful opportunity for the men and women of JSC to gain a more in-depth understanding of important role our new administrator sees for Total Quality Management in the day-to-day operations of the agency," said JSC Acting Director Paul J. Weitz.

"TQM already is an important part of our lives at NASA, and with Dan Goldin's support it will become an even more dynamic force in the way we do business in the future," he added. "I urge everyone to spend time thinking about their questions on continuous improvement, then attend the colloquium and ask them."

Goldin's portion of the presentation will involve video, but questions from the field centers will be audio only.

The discussion is a continuation of the TQM colloquium series that has concentrated on the ideas and experiences of experts outside the space agency. It will be the first in a series of seminars in the coming months that will focus on TQM lessons learned by NASA managers and relating specifically to NASA programs. The seminars are being planned about once a month, as scheduling permits.

Goldin also has invited speakers from other centers to discuss topics related to continuous improvement, among them Ed Stone of NASA's Jet Propulsion Laboratory and Jay Honeycutt of Kennedy Space Center. Stone is expected to discuss TQM in relation to the Cassini mission to study Saturn, and Honeycutt is expected to talk about space shuttle processing.



JSC Photo by Andrew Patnesky

STS-50 Mission Specialists Bonnie Dunbar, left, and Ellen Baker participate in crew emergency egress training in the Crew Compartment Trainer in Bldg. 9. The entire crew went over emergency exit procedures and the launch sequence again this week at Kennedy Space Center during the terminal countdown demonstration test.

Longest shuttle mission set for launch June 25

By James Hartsfield

Following a final review Tuesday, shuttle managers set 11:07 a.m. CDT June 25 as the launch date for *Columbia* on STS-50 carrying the United States Microgravity Laboratory on the longest shuttle flight ever.

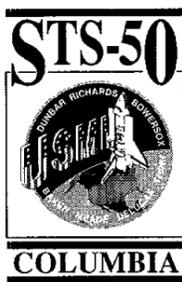
With an on-time launch, *Columbia* would land at 7:35 a.m. CDT July 8, after a record 12 days, 20 hours, 29 minutes in orbit. The crew — Commander Dick Richards, Pilot Ken Bowersox, Mission Specialists Bonnie Dunbar, Ellen Baker and Carl Meade, and Payload Specialists

Larry DeLucas and Eugene Trinh — successfully completed a countdown dress rehearsal Tuesday. At Launch Pad 39A, technicians completed an electrical test of *Columbia's* main engine connections and hot-fired an auxiliary power unit this week.

The countdown for *Columbia* is scheduled to begin on June 22 at the T-minus 43 hours mark.

Atlantis, being prepared for a July launch on STS-46 with the European Retrievable Carrier and the Tethered Satellite System, was moved

Please see **ATLANTIS** Page 4



Shuttle chiefs scaling down Florida move

Utsman to direct, Nicholson to manage space shuttle program

About half of the Space Shuttle Program workers at JSC who had been expected to move to Kennedy Space Center under a reorganization plan adopted late last year will remain at JSC, NASA Associate Administrator for Space Flight Jeremiah W. Pearson III said Wednesday.

Thomas Utsman will become the space shuttle program director under the new organization plan, and Leonard Nicholson, who has been shuttle program director since Jan. 1, will remain at JSC as shuttle program manager.

The previously planned relocation of the shuttle program director from NASA Headquarters to KSC required the transfer of some program management functions and would have involved the relocation of approximately 20 people. The number of moves was halved in an effort to strengthen the contact between the operations personnel working on space shuttle flights and space station development and assembly.

"One of the main challenges for the shuttle manager's office in the coming years will be to oversee the integration of the shuttle and Space Station *Freedom*," said Pearson. "In light of that, it will be more efficient for the manager to be at JSC where personnel reside who are responsible for the mission operations for both shuttle and station, as well as engineering and design support for both programs."

Freedom will be carried up in 18 separate stages aboard the shuttle and assembled in space. Assembly of the orbiting international research center will begin in late 1995.

Nicholson, who will remain a

Headquarters employee detailed to JSC, discussed the upcoming changes in an all-hands briefing for his organization last Thursday in Teague Auditorium.

Under this revised organization, a limited set of functions will be transferred to support the program manager in the areas of configuration and data requirements, ground operations and project integration support and will involve approximately 10 people being relocated to KSC.

Utsman, currently deputy associate administrator for the Office of Space Flight, will be given responsibility for directing long-range shuttle planning, space shuttle continuous improvement activities and efforts to reduce shuttle operations costs while maintaining safety. He previously has held shuttle management posts in both Washington and Florida, including deputy director of Kennedy Space Center.

Nicholson will oversee the day-to-day management of the shuttle program and the integration of the shuttle and Space Station *Freedom*. Management of vehicle integration and launch processing will continue to be the responsibility of Nicholson's deputy, Brewster H. Shaw, at Kennedy Space Center.

The previous restructuring had reflected recommendations made by former NASA Deputy Administrator J.R. Thompson in an effort to streamline shuttle management by dissolving the Shuttle Program Office at NASA Headquarters and locating the core of the shuttle management team at KSC.

Pearson took over as associate administrator for space flight after William Lenoir resigned in May.



Nicholson

'Blueprint for Space' exhibit coming to JSC

A new exhibit of graphics and artifacts called "Blueprint for Space: Science Fiction to Science Fact" will take up residence in the Bldg. 2 Visitor Center starting June 25.

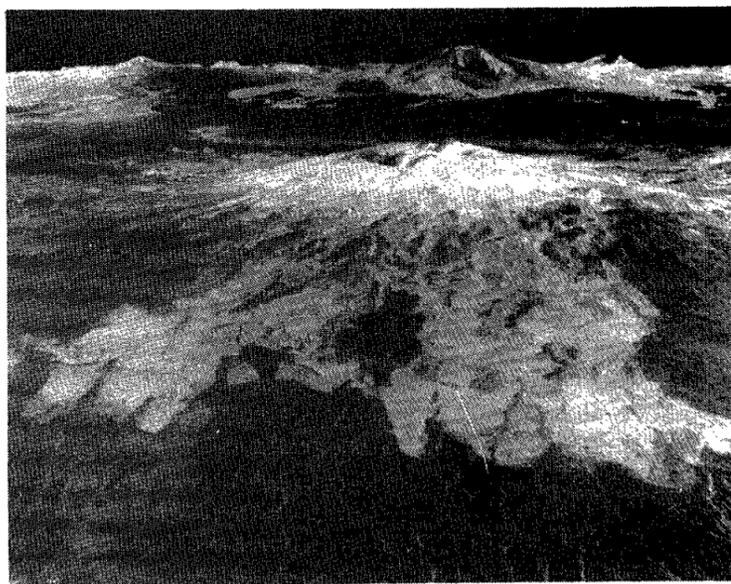
The exhibit, developed by the U.S. Space and Rocket Center with a funding grant from IBM, focuses on the earliest planning of the American space program by Wernher von Braun and features paintings and original spacecraft drawings from that period.

"Space flight has sparked the imagination since humankind first became aware that everywhere were worlds other than our own," reads

the exhibit brochure. "Early speculation provided a series of sketches, some whimsical and others more earnest, leading to the serious blueprints for space exploration that appeared in the 20th Century."

The exhibit also features reproductions of 1950s *Collier's* magazine covers that served as a medium for von Braun to explain the workings of space flight. Artifacts from the careers of von Braun and rocket pioneer Dr. Hermann Oberth also will be on display.

All JSC employees are invited to view the display in the north lobby of the Visitor Center beginning June 25.



NASA Photo

Lava flows extend for hundreds of kilometers across the fractured plains of Venus in this computer-generated three-dimensional image of the Maat Mons volcano produced from Magellan synthetic aperture radar and radar altimeter data. The vertical scale has been exaggerated 10 times. In the background is Sapas Mons, another volcano.

Magellan finds large landslides

Large landslides, similar to those that have been known for some time to occur on Earth and Mars, have been identified on Venus by Magellan Project scientists.

Four images, show evidence of the landslide process, said Magellan scientists at NASA's Jet Propulsion Laboratory. One image clearly shows rubble beneath a cliff.

Project Scientist Dr. Steve Saunders said the large landslides could occur on Venus about as frequently as they do on Earth, about once a year, but they usually are larger than terrestrial slides, he said.

Landslides occur on steep slopes that have formed by faults and on the slopes of volcanoes and generally are triggered by seismic activity or quakes.

The most dramatic landslides on Venus are seen beneath the slopes of volcanoes and may have

Please see **VENUSIAN**, 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.

EAA New Braunfels River Raft Trip (8:30 a.m.-10 p.m. July 11, includes transportation, 2-3 hour raft trip, barbecue dinner): \$36.

Fiesta Texas Park (San Antonio): adult, \$19.50; child 4-11, \$13.55.

Sea World (San Antonio): adult, \$18.90 (child free with paying adult); child 3-11 \$13.55.

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.

Metro passes, stamps, Walt Disney Club memberships also available.

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. June 30. Cost is \$5.

Defensive driving — Course is offered from 8 a.m.-5 p.m. July 11. Cost is \$19.

Country and western dance — Course meets Mondays for six weeks beginning June 15. Beginner class meets from 7-8:30 p.m. 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.

Exercise — Low-impact classes meet from 5:15-6:15 p.m. Mondays and Wednesdays, beginning June 15. Cost is \$24.

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

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

Crime prevention — Citizens Against Crime, a private company, will present a free program entitled "Living in a Dangerous World" at 5:30 p.m. June 25 in the Gilruth Center.

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

Sale/Lease: CLC/Baywind II condo, 2-2-2, redecorated, W/D, \$575, 283-5471 or 280-8796.

Rent: Galveston beach house, D/W/M, cent air/heat, furnished. Ed Shumiak, x37686.

Sale: Friendswood, Regency Estates 3-2-2A, lg lot, landscaped, \$93K. Rick, 335-4415.

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

Sale/Lease: CL, Baywind II condo, 1-1, \$27.9K. Leon, 512-869-0389.

Sale: 71 acres Ranch, La Moca Hwy 83 Webb County No of Laredo, 2 blinds for hunting, 2 deer feeders, 2 BR on 9' stilts, water well, CPL electric pwr, mineral rights, \$120K. 326-1833.

Sale: Orlando timeshare at Vistana Resort, 2 BR, sleeps 8, 1300 sq ft, 2nd floor, screened porch, \$9.9K. Phil, 283-5648.

Rent: Epcot, Disneyworld, 2 BR condo, sleeps 4, lg kitchen, microwave, stove, dishwasher, W/D, master BR has whirlpool, 2 nights/3 days at Kissimmee, Florida, was \$350/night, now for \$500 OBO, rental good through Oct. 1, 1992, not a timeshare. Diane, 283-5618.

Sale: Hilltop Lakes lot, 90 x 105, lg oak trees, \$5K OBO. x34563.

Lease: Piper's Meadow, 2-2-2, blinds, fans, gar dr opener, fenced, \$700/mo plus dep. Tracy, x32526 or 486-3946.

Sale/Lease: El Dorado Trace condo, 1-1.5-1CP, appl, patio, balcony, FPL, fans. Jeane Wright, 991-0237 or 761-3622.

Lease: Webster/Ellington, 2-1 condo, many extras, \$450/mo. Eric, x38420 or Dave, x38156.

Rent: Galveston condo, furnished, sleeps six, Seawall Blvd & 61st St, Wk/dly/wknd. Magdi Yassa, 333-4760 or 486-0788.

Lease: Nassau Bay TH, remodeled, 4-2-2, master dn, 2000 sq ft, lg gar, deck, atrium, 2-story den, 1 - 3 yr lease, \$1290 or \$119.9K. Jerry, x38922 or 488-5307.

Sale: Countryside, 2-2.5-2A two story, lg corner lot, covered deck, all bdrms up, intl room, CCISD, \$66.9K. 554-7623.

Sale: Alvin, 1/2 acre lot, some trees, all utilities, \$18K. Bob, 283-5340.

Cars & Trucks

'74 Pontiac LeMans Sport Coupe, 350 eng, new paint, new shocks, new vinyl top, A/C, 90K mi, AM/FM/cass, no rust, \$3K. x38749 or 409-938-8643.

'89 Mercury Tracer Sport, 2 DR, cranberry, PS/A/C, AM/FM/tape, 5 spd, 24K mi, \$4.5K OBO. Craig, x37416 or 286-4885.

'75 Datsun PU, needs eng work, \$150 OBO. 482-2157.

'85 Honda Accord LX, 4 DR, AM/FM/cass, AC, pwr windows/locks, 5 spd, PS, cruise, 130K mi, runs good, \$3150. 482-5624.

'81 Fiat X1/9, removable top, new tires, \$2.2K. Roger, 474-5055.

'55 Chevrolet 2 DR, 350 auto, Holley carb,

headers, AM/FM/tape, \$3K. 474-5055.

'90 Chev S10 4 x 4 PU, 5 sp, ext'd cab, Durango pkg, 30K mi, warranty, \$11.5K. 471-1129.

'90 Mitsubishi Galant LS, 4 DR, auto, ex cond, air, AM/FM/cass, low mi, elec doors and windows, cruise, \$12.2K. Karrie, 484-9233.

'91 Cadillac Coupe DeVille, 10K mi, red, red leather int, gold trim, orig owner, \$20K. Charlotte, 335-1607.

'87 Proscche 924S, red w/blk int, 5 spd, pwr sunroof, Alpine alarm, Nakamichi stereo, shop manuals, records, ex cond, \$7K. Leonard, 283-4150 or 488-7616.

'83 BMW 318i, 49K, new tires, new int, \$4K OBO. Irene, x32123 or 286-0206.

Street legal dune buggy, 1500 cc motor, ex cond, \$3.4K. Rick, x34569 or 482-2423.

'84 Chevy S10 Blazer, 4 x 4, 5 spd, V6, 2.8 l, PS/PB, air, AM/FM/cass, cruise, full instrumentation, Tahoe pkg, 72K mi, TLR pkg, tinted, \$4.8K. x34424 or 480-6221.

'84 Audi 5000 Sedan, 4 DR, 45K mi, ex cond, \$4.8K OBO. 480-8721.

'85 Chevy Cavalier, 4 DR, 4 cyl/2.0l, auto, 76K mi, new tires/brakes, \$2.2K. 488-5522.

'84 Ford 250 XLT Supercab PU, trlr pkg, good cond, \$4.7K. 482-2157.

'59 Chevy PU for restoration or parts, BO; '80 Chevy Van, good cond, auto, \$1.8K; '76 Datsun B210 2 DR Sedan, BO. 771-1012.

'67 Ford Econoline Van w/7.5 engine, \$900 OBO. Greg, x32258 or 326-2807.

Boats & Planes

'18' Wellcraft/Sportfisherman w/center console, 115 Yamaha, trlr, good cond, \$6.5K. Tom, 283-5512 or 333-3425.

O'Brien Freesail Friendship sailboat w/sail, good cond, \$150 OBO. 283-4175 or 280-8645.

Hobie 16' Catamaran w/trlr, '82 Nationals boat, 2 sets of sails, rigged for racing w/accessories, ex cond, \$2.5K. Bob, x34468 or 486-7687.

'87 18' Wellcraft, ex cond, \$7.2K. Hanan, x33198.

Bay Area Aero Club memberships avail, FAA certified instructors. Earle, 283-5408.

17' outbd, classic wood, Mercury 65HP, Sportsman trlr, good cond, \$2K. Bill, x35420 or 326-1020.

Cycles

'83 Honda Shadow, 750 cc, 8K mi, windberry red, garaged, good cond, ACC, \$1.2K. William, x30277 or 332-7092.

Raleigh competition bike w/Simano Groupo Index Shifting, 996-8114 or 282-2872.

Men's Schwinn LeTour 10 sp, \$125; Raleigh "Chill" 18sp ATB, \$400. Blaine, x32765 or 486-9825.

Honda Hobbit, less than 1300 mi, \$375. Rick, 335-4415.

'82 Yamaha Seca 750, shaft drive, 4 cyl, Yamaha fairing, 16K mi, clean, \$1.3K. Hooper, x39027 or 585-0156.

Audiovisual & Computers

Genesis arcade controller set w/2 controllers, 5 games, \$250 nego. 996-9534.

Hyperion PC w/256K, wordprocessor, multi-plan, modem, \$250. Tim, 996-9191.

Sega Genesis game system, \$90; games: Spiderman, Sonic, Sagaial, \$15/ea; Rapid fire joy stick, \$15; NES advantage joy stick, \$15; TurboGrafx game, Nintendo games, \$15/ea.

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JSC

Dates & Data

Today

CLCTS meets — The ninth annual Clear Lake Council of Technical Societies Awards Banquet will be at 5:30 p.m. June 12 in the Gilruth Center. Joe Allen, president of Space Industries Inc., will speak. The outstanding technical person, administrator and educator of the year will be announced. Tickets are \$15. Reservations are due June 8; call Marcia Taylor, x30195. For more information, call Andy Lindberg, x31474.

Cafeteria menu — Special: meat sauce and spaghetti. Entrees: baked scrod, liver and onions, fried shrimp. Soup: seafood gumbo. Vegetables: green beans, buttered broccoli, whipped potatoes.

Monday

Cafeteria menu — Special: wieners with baked beans. Entrees: beef chop suey, breaded cutlet with cream gravy, grilled ham steak. Soup: beef and barley. Vegetables: buttered rice, Brussels sprouts, whipped potatoes.

Tuesday

JSC Honor Awards — The JSC Honor Awards Ceremony will be at 3:30 p.m. June 16 in the Gilruth Center. A reception will be held at the conclusion of the ceremony for award recipients and their guests. All employees are invited to attend. For more information, call x38413.

Inventors luncheon — The sixth annual JSC Inventors Luncheon will be at noon June 16 in the Gilruth Center, Rm. 216. JSC Acting Director Paul J. Weitz will present 39 plaques to JSC inventors. For more information, call the JSC Patent Counsel

Office, x31012.

Cafeteria menu — Special: pepper steak. Entrees: fried shrimp, pork chop with applesauce, turkey a la king. Soup: celery. Vegetables: au gratin potatoes, breaded squash, buttered spinach.

Wednesday

Astronomy Seminar — The Astronomy Video Tape Series continues during the weekly JSC Astronomy Seminars. "The Fastest Pulsars" will be shown at noon June 17 in Bldg. 31, Room 129. For more information, contact Al Jackson at 333-7679.

Cafeteria menu — Special: Mexican dinner. Entrees: fried catfish with hush puppies, braised beef ribs. Soup: seafood gumbo. Vegetables: Spanish rice, ranch beans, buttered peas.

Thursday

AFCEA meets — The Armed Forces Communications and Electronics Association will meet at 11:30 a.m. June 16 at the Holiday Inn on NASA Road 1. Army Col. Jeffrey Ellis will discuss "Army Air Defense Programs." Cost is \$12 for members, \$14 for non members; reservations are due June 12. For more information, call Veronica Mullins, 283-7342, or Luz Wood, 283-7308.

Spacecraft Design reunion — A reunion for employees of the former Spacecraft Design Division will be held at 4:30 p.m. June 18 at the Gilruth Center pavilion. Refreshments will be served. Cost is \$6; reservations are due June 15. Call Sharon at 38960, Lori at 36600, Flo at 33738, or Ann at 36619.

Cafeteria menu — Special: ham-

burger steak with onion gravy. Entrees: corned beef with cabbage and new potatoes, chicken and dumplings, tamales with chili. Soup: split pea. Vegetables: navy beans, buttered cabbage, green beans.

June 19

Juneteenth picnic — The JSC Black Cultural Association will present its annual Juneteenth Picnic from 3-9 p.m. June 19 at the Gilruth Center. Tickets, on sale until June 15, are \$10 for adults, \$4 for children under 12. The JSC BCA Ron McNair Scholarship Award will be presented. For tickets or more information, call JSC Black Program Manager Charles Hoskins at x34831.

UNIX meeting — The JSC UNIX Systems Administration Group will meet at 2 p.m. June 19 in Bldg. 12, Rm. 256. Demetrios Yannakopoulos of Lockheed will discuss "The Vi Editor." For more information, call Mark Hutchison, x31141.

Cafeteria menu — Special: barbecue link. Entrees: deviled crabs, broiled codfish, liver and onions. Soup: seafood gumbo. Vegetables: buttered corn, green beans, new potatoes.

June 23

Loral NMA meets — The Loral chapter of the National Management Association will meet at 5:30 p.m. June 23 in the Gilruth Center. James McIngvale of Gallery Furniture will speak. All JSC employees are invited. Cost is \$12 per person; reservations are required by June 16. Call Jim Christiansen, 335-6988, Joe Betters, 335-2506, or Suzanne Carter, 335-50957.

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'75 Datsun PU, needs eng work, \$150 OBO. 482-2157.

'85 Honda Accord LX, 4 DR, AM/FM

When Storms Break

JSC implements annual plan to prepare for hurricane season

By Kari Fluegel

"In tonight's weather, we're watching a low-pressure system out in the middle of the Gulf of Mexico. It has all the makings of a potential hurricane, so we'll be keeping an eye out there for the next several days to see what develops."

Along with thoughts of lazy summer days, every June signals the beginning of hurricane season and the start of JSC hurricane preparedness activities.

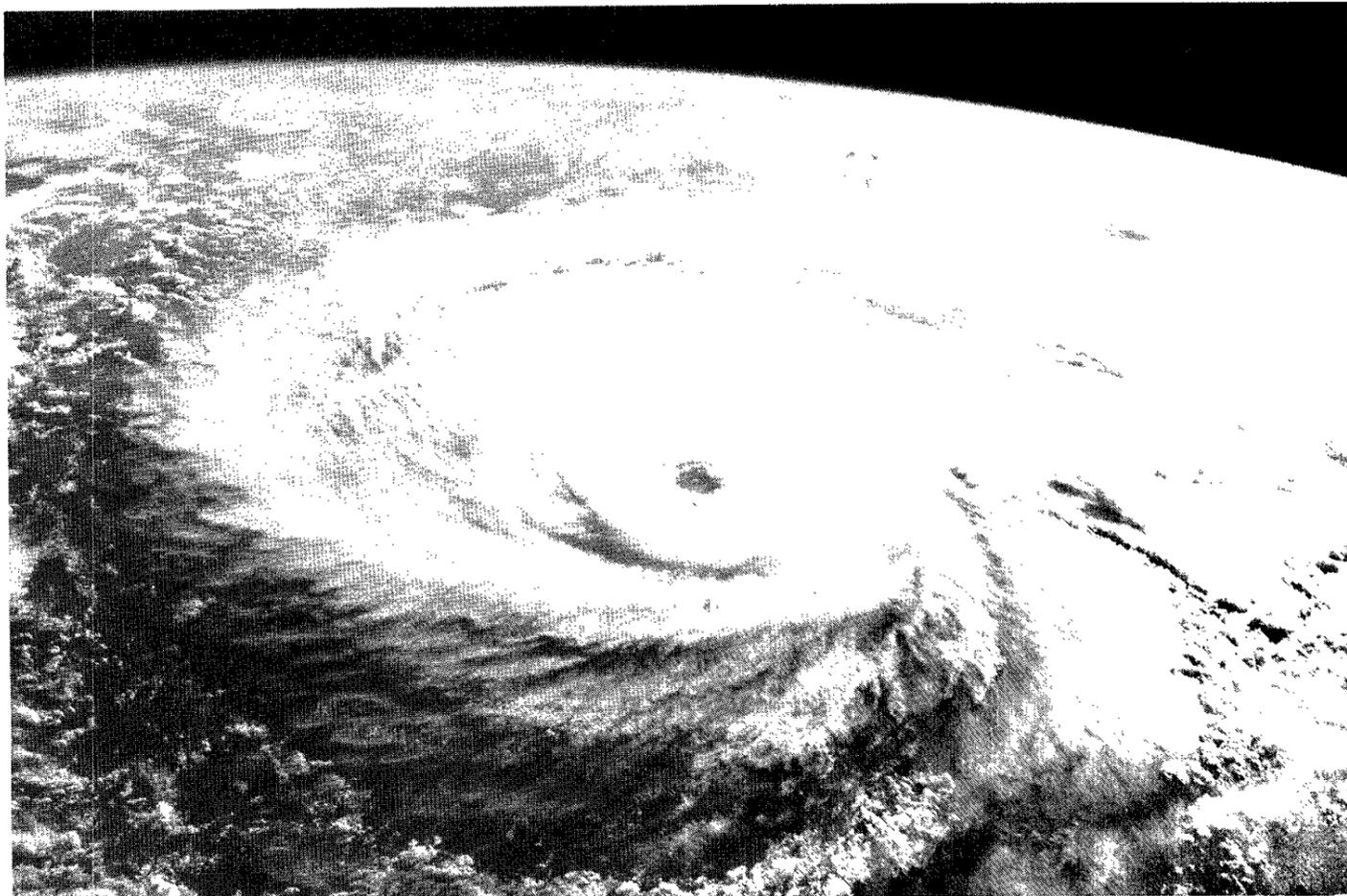
Though it refrains from making predictions about the intensity of the hurricane season, the National Weather Service said the summer's weather will be somewhat affected by the "El Nino" phenomena.

"El Nino" is a periodic warming of the waters in the Pacific Ocean that begins near Australia and moves slowly eastward to the coast of South America. This causes a temporary change or shift in the worldwide weather patterns that could affect hurricane activity over the Atlantic, Caribbean and Gulf of Mexico.

"El Nino" also causes a band of winds known as the jet stream to remain strong over southeast Texas and the northern Gulf resulting in the severe thunderstorms such as those recently experienced in the area.

Regardless of worldwide weather patterns, JSC annually activates the center's comprehensive hurricane plan to protect center facilities should foul weather threaten the Clear Lake area.

The first step in implementing the plan is taken June 1, when hurricane season begins.



Typhoon Odessa was photographed by the STS-51L crew over the Pacific Ocean in August 1985.

JSC at this time enters a state of continual preparedness or Action Level I in anticipation of the summer storm season.

At Action Level I, personnel assigned to responsibilities for hurricane and severe weather plan implementation are required to assess, review and prepare the plans to ensure a state of readiness.

Many Gulf coast residents have found grocery shelves emptied of water, batteries and non-perishable food items when a hurricane threatens the area. Level I ensures that JSC will have a full complement of rations and supplies to support the next level of activity, said Keith McQuary, hurricane plan manager.

"We're in a constant state of preparedness so we can protect the taxpayers' investment," he said.

"The pressure system out in the Gulf has deepened into a Tropical Storm moving toward the Texas coast. At the rate this particular storm is growing, I anticipate that it will be a full-blown hurricane by the time it hits land."

If a hurricane threatens the Clear Lake Area, JSC storm preparedness plans move to a Level II status and, at the discretion of the Center Operations Director Ken Gilbreath, officials open a hurricane command post in Bldg. 30.

Each JSC organization has a designated emergency planning representative and an alternate who are kept informed on the status of the action levels during a hurricane alert and have information on preparing for a hurricane.

"We continue to watch Hurricane Walter as it crosses the Gulf of Mexico. Right now the storm is a Category 2 hurricane that has winds of 96 to 110 miles per hour. We expect this storm to continue to strengthen and be a Category 4 hurricane by the time it makes landfall. The weather service is predicting landfall will occur just east of Galveston Island early Friday morning."

Once the threat of hurricane grows great enough, Acting JSC Director Paul J. Weitz will decide whether to close the center and begin evacuation of all non-essential personnel. Action Level III then starts.

Employees are responsible for securing their own work areas prior to evacuation. Such preparations include unplugging computer terminals and covering them with plastic bags, raising blinds to prevent additional wind damage should windows break, storing classified and other important materials in safe areas, and closing all doors.

Having evacuated the center and possibly the area, employees can continue to stay in contact with the center through the use of two recorded phone services. The Emergency Information Line, x33351, provides potential storm information, plans for safe-guarding work areas and information throughout the year on other area emergencies, and the Employee Information Service, x36765, provides information about closings during hurricane season as they are announced.

Center personnel will be notified when to return to work through the information services and radio and television reports.

Also during this time, area protection teams ready JSC's grounds for a storm — checking buildings, picking up loose objects outside and securing all possible hazards.

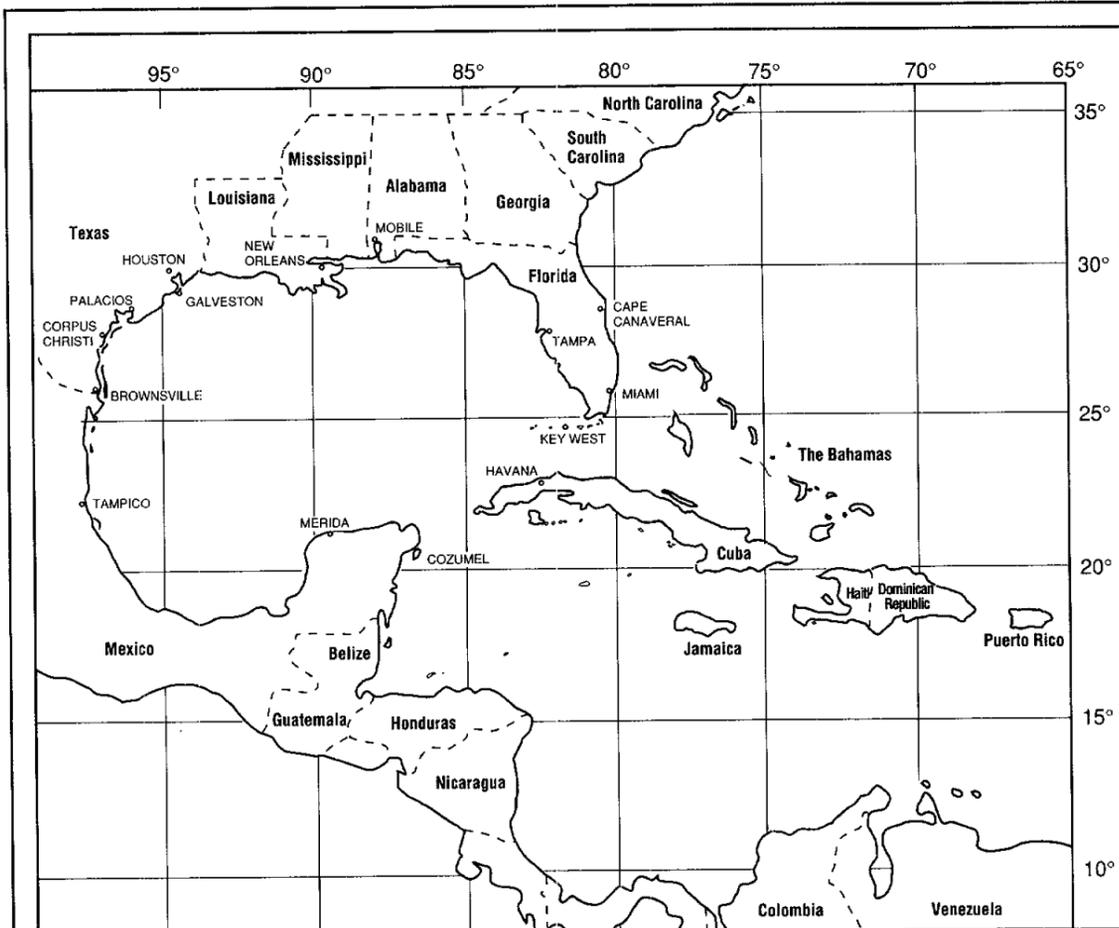
"Hurricane Walter is about 30 miles off the coast of Galveston Island. The wind has picked up already and rain is starting to fall in the Clear Lake area. Walter has reached the Category 4 status which means winds are between 131 and 155 miles per hour and has a storm surge of 13 to 18 feet above normal. A storm surge of that magnitude could put this area virtually under water. This part of Texas has not seen a storm this big since the turn of the century. Hurricane Alicia in 1983 was a minimal Category 3. Residents, however, have taken all the necessary precautions to secure their homes and businesses."

The Hurricane Rideout Team works up to the point the weather turns dangerous, securing the center. Then, the wait begins.

When the storm hits, Level IV starts. The Hurricane Rideout Team gathers at its posts and waits for the storm to subside. Activities during the storm are limited to only essential emergency repairs that can be performed without endangering the personnel safety.

The team moves back into action once the storm passes, assessing the damage and arranging for necessary repairs.

"The team is here on site so immediately after the storm passes, we're able to document the damage and begin work plans for restoration of the site," McQuary said. □



Hurricane Survival Checklist

To prepare for hurricane season:

- Determine the elevation of your home above mean sea level. Source: Harris/Galveston Coast Subsidence District, 486-1105.
- Access the maximum storm surge height which might occur in your area. Source: Nearest Weather Service Office.
- Choose the route you would travel to safety.
- Locate the nearest Civil Defense or Red Cross shelter.
- Inventory your property and what your insurance will cover.

If a hurricane warning is issued, act promptly:

- Begin a continuous communications watch by monitoring TV or radio weather broadcasts. Discount rumors.
- Prepare your residence and property for high winds by securing all outside objects, protecting large windows and exposed glass, and moving small boats or trailers close to the house and weighting them down.
- Check mooring lines of boats in the water and then leave them.
- Move valuable and personal papers to highest points.

If you decide to remain at home:

- Remain indoors.
- Stay away from exposed windows and glass doors.
- Stay on the downwind side of the house.
- Keep a continuous communications watch.
- Keep calm.

If you must leave home:

- Make sure there is a safe refuge within reach that can accommodate you. Leave early, in daylight if possible.
- Don't travel farther than necessary. Close and lock all windows and doors.
- Carry survival supplies, important papers, and at least one change of clothes.

Important numbers:

Emergency Information Line, x33351
Employee Information Service, x36765

National Management Association's JSC chapter presents top awards

By Kari Fluegel

Five civil servants recently were honored by JSC's chapter of the National Management Association.

John W. O'Neill, deputy director of the Mission Operations Directorate, received the Silver Knight of Management Award, the highest honor given by the JSC NMA chapter.

O'Neill was cited for being a charter member of the chapter, for his ability to inspire his fellow employees, for his demonstrated leadership abilities and for his adherence to the NMA Code of Ethics.

The Manager of the Year Award was presented to Clyde L. Lowrimore, JSC's deputy comptroller. Lowrimore was instrumental in

the development of a plan to realign the Comptroller's Office following the passage of the Chief Financial Officer's Act. Due in part to his efforts, all policies and procedures for the new directorate have been successfully implemented.

Lowrimore was cited for his management skills, high technical standards, ingenuity and creativity.

David W. Heath of the Automation and Robotics Division received the Distinguished Recognition Award. Heath has served in several chapter offices and is currently an NMA national director. Among his contributions was his work with the chapter and the Texas Gulf Coast Council chapters in their American



O'Neill

Lowrimore

Martin

McCullough

Heath

Enterprise Speech contest.

Sharon Martin, manager of the Orbiter Resources and Analysis Office, received the 1992 NMA Leadership Award for her accomplishments at JSC. The awards committee recognized her skills as a competent, ethical and impartial manager who is well respected by her management and her peers.

Clay E. McCullough, manager of the Flight

Support Equipment Office in the Orbiter and GFE Project Office, received a special Certificate of Recognition. McCullough is responsible for managing a diverse team of support contractors, both U.S. and Canadian.

The awards were presented at a May 27 meeting at the Gilruth Center that featured a panel discussion on cultural diversity in the workplace in the 1990s.

JSC Astronomical Society planning Kamchatka trip

The JSC Astronomical Society has negotiated an expedition across the Bering Straits into the previously closed area known as the Kamchatka Peninsula.

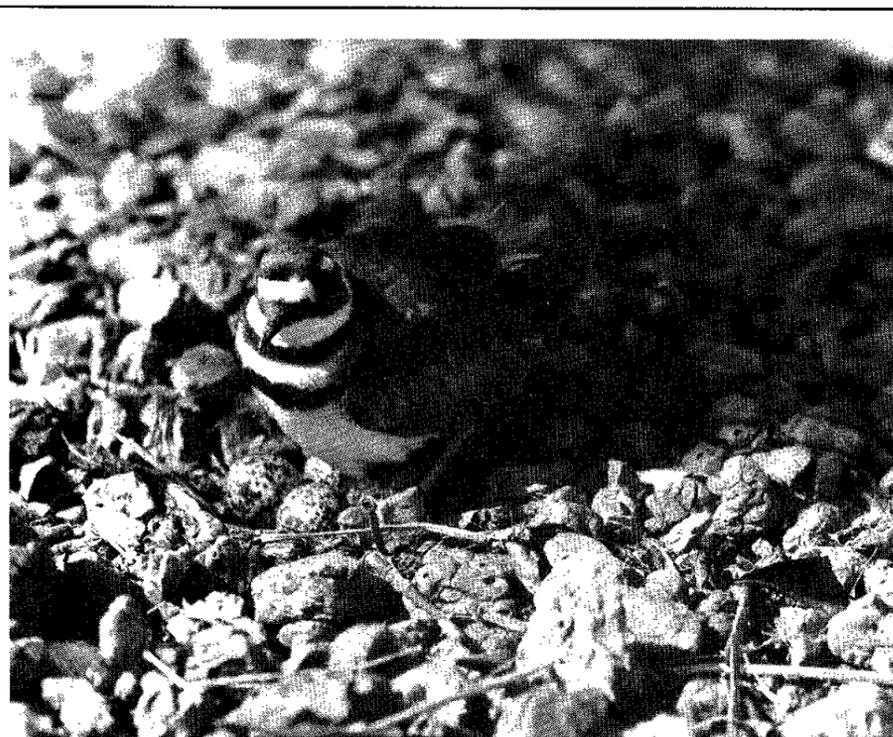
JSC employees and contractors who are interested in adventure and exploration, geology and volcanology are being invited to participate in the trip. The region is similar to that of Mars, containing more than 200 volcanoes packed together in an area that is part of the "Ring of Fire" surrounding the Pacific Basin. At any given time at least 24 volcanoes are active with two or three producing significant eruptions every year.

The area is so rugged that it is being used to test the Russian Mars Rover that is scheduled to be launched in 1996. The virtually unexplored area contains one of the four geyser fields in the world.

The Institute of Geology and Geochemistry in Petropavlovsk, Kamchatka — the site of a nuclear submarine base — has agreed to permit the expedition as the first western tour of the region. Soviet helicopters will be used to ferry the group, which will be able to assist Russian geologists in reconstructing the eruptive history of the Korymskii volcano through sample collection.

A Korean Airlines Boeing 747 was shot down several years ago after overflying the region.

Anyone interested in making the trip should contact Paul Maley at x34636. The trip will run from August 30 to September 7. Some hiking and camping will be involved.



JSC Photo by Robert Markowitz

PARKING LOT APARTMENT—A mother Killdeer warms her four eggs in a nest near the parking lot of Bldg. 31. The bird, which favors a marsh, swamp and seashore habitat and is common to the area, took up residence at JSC recently. Killdeer chicks develop fast, and once they hatch should be gone after about a day. Killdeer are known for their plaintive, penetrating and much-repeated cry.

Engineering realigns automation, robotics division organization

Engineering Directorate managers are adjusting the Automation and Robotics Division's organizational structure to align it more closely with its operating structure, Engineering Director Henry Pohl said Wednesday.

The realignment will move the Robotic Intelligence Section to the Robotic Systems Technology branch, placing both the hardware and software aspects of robotics development in the same organization. Locating both in the same branch is expected to enhance cooperation.

In addition, all of the Automation and Robotics Division laboratories will be consolidated into a single branch. The new branch, called the Automation and Robotics Lab Management Branch, Code ER611, will stimulate synergism between the hardware and software development evaluation labs and cultivate a "customer focused" attitude needed for the valuable division resource to achieve its potential for divisionwide support, Pohl said.

The laboratories affected are the Robotic Systems Evaluation Laboratory, the Dexterous Robotics Laboratory, the Telepresence Laboratory, the Mobile Robotics Laboratory, the Robotic Sensor Integration Laboratory, the Electronics Development Laboratory, all in Bldg. 9NE; and the Integrated Graphics Operations Laboratory, the Intelligent Systems Laboratory and the Computer Aided Design Lab, all in Bldg. 32.

The SSAIAF Management Office, Code ER511, is being renamed the Dynamic Systems Test Branch.

Spaceflight Meteorology Group to show off new home

The National Weather Service's Spaceflight Meteorology Group will show off its new home Wednesday during a special open house.

The SMG recently moved its operational area to Bldg. 30, Room 239, immediately adjacent to the Mission Operations Control Center. The new location will provide the

staff with expanded work areas and will facilitate interaction with flight controllers and mission managers.

SMG's primary interactive system is the Meteorological Interactive Data and Display System. The operations area houses five MIDDS workstations, most of

which are fully used during pre-launch and pre-landing support.

The open house, set for 9 a.m. to 1 p.m., will allow employees to tour the operations area and see demonstrations of the weather equipment.

The new location recently was inspected by Dr. Elbert Friday,

director of the National Weather Service. Friday also met with SMG staff members and received a shuttle photograph from STS-43 Commander John Blaha.

The SMG provides weather support for all shuttle landings and abort contingencies, and provides other support weather functions for JSC.

Venusian landslides shorter than those on Earth

(Continued from Page 1)

formed much like the Mount St. Helens eruption in Washington state in 1980, Saunders said.

"The Mount St. Helens eruption is an example of the formation of an avalanche caldera where a large portion of the volcano collapsed and flowed downslope," he said, "but the avalanche calderas

on Venus are much larger."

The larger landslides on Venus spread 18 miles across the surface. Most Venusian landslides have a rough, hummocky appearance that is typical of all landslides, he said. They are made of a jumble of rock fragments of all sizes that broke up during the violent downhill journey in the few minutes it takes

to form the slides.

Saunders said the size of a landslide depends on the height of the slope from which it comes and the longest landslides come from the highest slopes.

The longest known landslides are found on Earth. Undersea slides reach more than 200 miles in length. Martian landslides are

next in size, with lengths of 60 miles and more. The largest Venusian landslides extend only about 30 miles.

Since erosion rates on Venus are so low due to the lack of water on the surface, landslides are an important mechanism in wearing down mountain regions on Venus. The rounded hills of the complexly

deformed tessera, or tile-like, terrain on Venus have probably been modified by numerous landslides, he said.

Magellan has mapped more than 97 percent of the planet, with about 35 percent of the surface imaged in both right and left-look modes and about 20 percent imaged in stereo using different look angles.

Worker's son earns NASA scholarship

Scott Wayne Seago, son of JSC employee Robert W. Seago of the Space Shuttle Ground Systems Division, recently was selected as one of four recipients of the 1992 NASA College Scholarships.

Seago graduated first in his class at J. Frank Dobie High School and plans to attend the Massachusetts Institute of Technology this fall to pursue a dual degree in chemistry and math.

The NASA College Scholarship Fund, Inc., established in 1982, was

endowed by Pulitzer Prize-winning author James A. Michener and was further endowed with a substantial gift again in 1991 from Michener.

Other NASA College Scholarship recipients are Matthew Michael Hosler Jr., son of Lewis Research Center employee Matthew Michael Hosler; Mark Joseph Birmingham, son of Goddard Space Flight Center employee Thomas J. Birmingham; and Matthew Edwin Clark, son of Kennedy Space Center employee George I. Clark.

LLTV Project workers begin reunion planning

The Apollo Program Lunar Landing Training Vehicle Project will commemorate its 20th anniversary with a reunion Sept. 12.

All veterans of the program that developed what was affectionately called the "flying bedstead" to test the control and landing characteristics of lunar landers on Earth and

to train lunar module pilots are invited to participate.

Detailed plans are still being developed. Anyone who was a part of the LLTV Project and would like to help plan the reunion should contact Herb Noakes at x34325, Peggy Zahler at x35511, or Conley Perry at x34352.

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.

Swap Shop ads are accepted from current and retired NASA civil service employees and on-site contractor employees. Deadline is 5 p.m. every Friday, two weeks before the desired date of publication.

Editor Kelly Humphries
Associate Editor Kari Fluegel

JSC Honor Awards to be rescheduled

The JSC Honor Awards Ceremony, which had been scheduled for Tuesday, has been postponed because of a scheduling conflict for JSC Acting Director Paul J. Weitz.

The decision was announced after this issue's Dates & Data was printed.

Weitz personally signed each of the Certificates of Merit that will be

presented to just over 100 employees and plans to hand them out personally. The JSC awards office plans to reschedule the ceremony early next week.

Rescheduling details will be announced on the recorded Employee Information Service, x36765, when they are available.

Atlantis enters processing stretch

(Continued from Page 1)

to Launch Pad 39B early Thursday. Atlantis now enters the stretch run for launch at the pad, after having been attached to its fuel tank and solid rockets earlier this week.

Elsewhere, Endeavour, in the Bay 3 processing hangar, continues a checkout following its maiden voyage on STS-49 last month. Endeavour's next flight, STS-47 with Spacelab-J, is planned for early Sep-

tember. This week, workers checked the Ku-band antenna, cycled the payload bay doors, removed heat shields from the main engines and removed the forward reaction control system.

Discovery, in the Bay 2 hangar, continued through a half-year period of upgrades and inspections. This week, workers validated the electrical system and performed leak tests on the water spray boilers.