

# Space News Roundup

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National Aeronautics and Space Administration

## Solid rocket stacks drive STS-26 date

By James Hartsfield

STS-26 remains on schedule for a late August launch and NASA is working with an internal target date of Aug. 22 for the return to flight, Rear Adm. Richard Truly, assistant administrator for space flight, said in a recent briefing.

"In the last month or six weeks since we've been stacking solid rocket motors, the stacking has gone slower than we initially anticipated," Truly said. "All of the small delays have been real delays working real problems that we didn't expect, but there are no show stoppers."

Also, confidence in the redesigned solid rocket motors (SRMs) is growing steadily through the severe tests being conducted, Truly said.

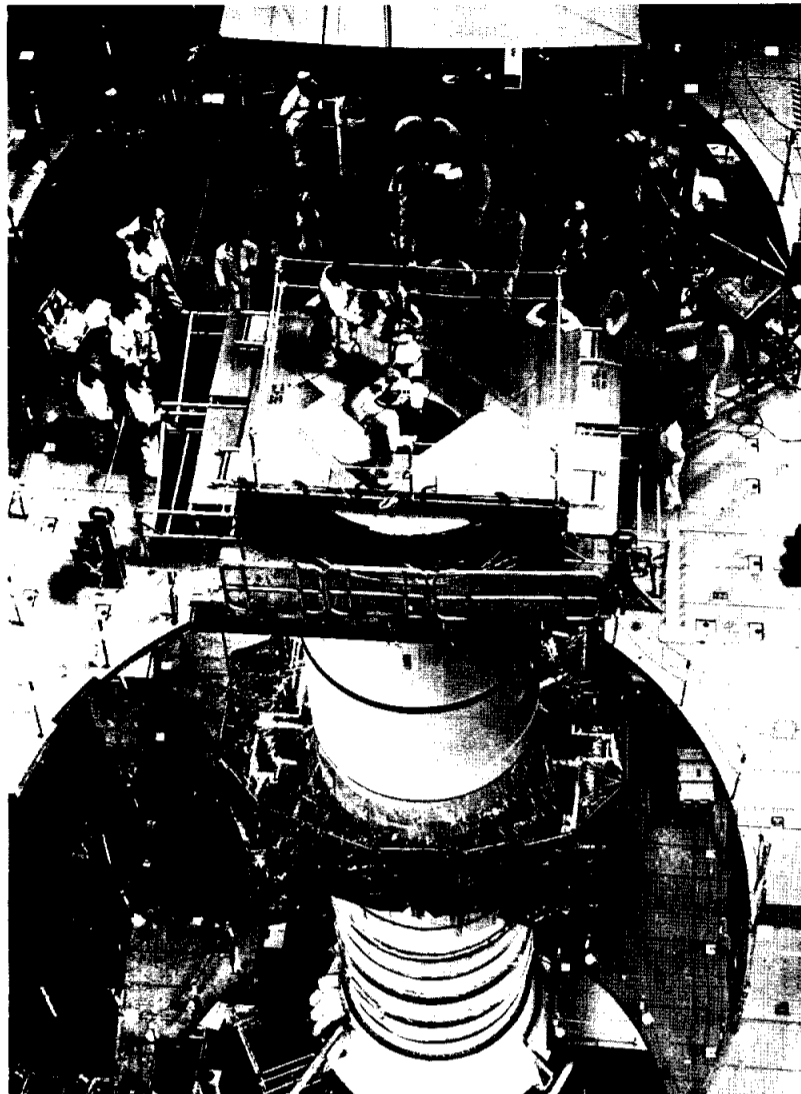
T D R S - C (Tracking and Data Relay Satellite C), the mission's primary payload, arrived at Kennedy Space Center May 16, and is now being mated to the Inertial Upper Stage that will boost it into geosynchronous orbit after deployment.

Truly said the launch schedule for STS-26 is being driven by the preparation of the SRMs. "The left solid rocket motor is stacked, checked out and, essentially, ready to fly," he said. The final segment of the right SRM is now being stacked, and all other segments are ready.

Discovery is "looking great" and is ready to be rolled over to the Vehicle Assembly Building once the SRMs have been stacked and mated to the external tank, Truly said. "All of this is going to be happening in a very short time, in the next few weeks and couple of months," he added.

"I think the people in the program are doing a bang-up job and we're ready to go fly," Truly said. "I feel good about the Shuttle program. You know, 1988 is going to be a real watershed year for this country. Not only are we going to elect a new president, we're going to fly the Shuttle. And this is also the year a number of our ELV (expendable

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**INSIDE INFORMATION** — Jeff Tuttle, a Morton Thiokol engineer, is lowered into the center bore of the stacked aft and aft center segment of the left solid rocket motor for STS-26. The procedure is being used at Kennedy Space Center to visually verify that the J-seals between segments are properly bonded.

## Cohen stresses human element in JSC success

Men and women at JSC have proven their ability to maintain technical excellence in the face of adversity and that ability is the key to garnering important assignments in the future, Director Aaron Cohen said in a May 23 "state of the center" address to all employees.

"There's no question that in the last two years the men and women of NASA, the men and women of the Johnson Space Center, the men and women of our contractors have been tested," Cohen told a full house in the Bldg. 2 Teague Auditorium. "But I'll guarantee you I'm very proud. They have not been found wanting in any way, and we are making great progress at this time."

JSC has a long history of technical excellence, he said, stressing that people and teamwork are the keys to technical excellence and technical excellence is the key to the future.

"JSC will be given important new program assignments only to the extent that we can demonstrate that we are technically prepared to handle them. It's not just the facilities such as Mission Control Center or the trainers and simula-

tors, it's really the people—the people sitting in the audience and the people watching the television—it's really you that are going to make this happen."

Broadcast live on closed-circuit television throughout JSC, Cohen's speech gave employees updates on the return to flight status, the NASA and Space Station budgets, strategic planning activities, the new visitors center and other new construction, progress on the new Orbiter, and new initiatives.

The results of the recent Qualification Motor-6 (QM-6) test of the redesigned solid rocket motor showed problems with the outer boot ring have been solved. He said the QM-7 test is scheduled for June 9, and Production Verification Motor-1 is to be tested July 26.

"If we can get through those two hurdles, I feel we'll have resolved the solid rocket motor issue," Cohen said.

The Space Shuttle main engines have undergone extensive tests during the standdown. Turbine blade cracks, a leaky heat exchanger and vibration unbalances all have been identified and fixed. More than 100 modifications have

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## Strategy teams eye centerwide issues

### Recommendations due this month

Six new Strategy Initiatives Teams are taking a closer look at JSC Strategic Game Plan issues that cross organizational boundaries, and they will recommend actions to the Senior Staff Strategy Team early this month.

JSC Deputy Director Paul J. Weitz said most of the 18 issues in question need to be resolved through joint actions of several JSC organizations. The issues were identified by the Strategy Implementation Working Group as it reviewed the implementation plans being developed to help each

organization understand its part in the plan.

"If I'm a branch chief or a section chief, I have to have something to read to tell me what I need to do to help the center," Weitz said.

The Critical Issues Team, led by Dan Nebrig, executive assistant director to JSC Director Aaron Cohen, will eye the critical issues management process, external

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### Team Excellence receives award

JSC is one of 15 recipients of the President's Council on Management Improvement (PCMI) Award, an honor citing centerwide Team Excellence efforts.

At the heart of the Team Excellence program have been development of the JSC Strategic Game Plan and a drive to achieve that vision by continuously improving quality and productivity, the award states.

"This award belongs to the JSC team — managers and employees, civil service and contractors," JSC Director Aaron Cohen said. "It recognizes the importance and effectiveness of their active support of JSC's Team Excellence effort. Through their continued support, I'm confident JSC will be able to position itself to meet the challenges of the future."

PCMI awards are presented to individuals or organizations that have made significant improvements in the quality and productivity

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## Back to the books

### Ellington aviator to attend International Space University

By James Hartsfield

Kathy Daues will be the only JSC employee in the inaugural class of the International Space University, an intensive nine-week summer session that will end with students from 17 countries designing a lunar base.

Daues, a flight simulation engineer trainee in the Shuttle Training Aircraft Branch at Ellington Field, was one of 100 students selected out of 350 applicants from 37 countries. The classes will be taught at the Massachusetts Institute of Technology (MIT) by an international array of top space experts, including several from NASA and JSC. Daues rides in the center seat aboard the modified Gulfstream II jet while learning to train astronauts in Shuttle approaches and landings.

Daues, who hopes to be selected as an

astronaut candidate, said the up-to-date subject matter and coursework planned for the International Space University (ISU) may give her credentials a boost when the next astronaut selections are made.

"I've been interviewed at every selection since 1980. I'm hoping that this program, along with other activities I have planned, will give me an edge next time around," she said. "Also, something with this amount of exposure to current space issues is bound to help you in any job at JSC."

The ISU, sponsored in part by NASA, private corporations, MIT, and educational agencies from the Soviet Union, China, Canada and Britain, will begin June 20. The faculty will include Joseph Loftus, JSC assistant director for plans; John Alred, technical assistant in JSC's

Advanced Programs Office; and Wendell Mendell, a planetary scientist in the Solar System Exploration Division.

Alred will head ISU's International Lunar Initiative Design Project, which will culminate in the students' Moon base design effort.

The ISU class, which will include 12 Soviet students, will hear 110 lectures on topics ranging from space policy, law and business to space sciences, engineering, architecture, life sciences and satellite applications.

This year's university is planned to be only the first of many to come, Daues said. "A lot is going to ride on this session—how it goes and how people react to it. Getting that much data concentrated on all these different topics ... I don't see how it couldn't help someone in the space

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Kathy Daues

## People

### Schwartz organizes benefit for children's hospital



Schwartz

Schwartz said. Employees from RSOC, Omniplan, NASA, and Kroger are helping with the event.

## Bulletin Board

### Civil Air Patrol plans Ellington open house June 6

The Ellington Composite Squadron of the Civil Air Patrol will host an open house at 6:45 p.m. June 6 at the Texas Air National Guard Base at Ellington Field. Members will be available to supply information on the many facets of the Civil Air Patrol, and several displays will be presented. Activities will include the squadron's cadets undergoing inspection plus an awards and baptizing ceremony.

### Professional secretaries meeting slated June 8

The Clear Lake/NASA Area Chapter of Professional Secretaries International (PSI) will hold its next meeting at 7 p.m. June 8 at the Holiday Inn on NASA Road 1. Peggy Morrow will discuss "Professional Dress for Respect." A social hour and dinner will precede the meeting at 5:30 p.m. The cost of the dinner will be \$9. For reservations, call Mary Todd, 282-3942. For more information, call Lillian Hudson, x31032.

### Area Space Society meeting scheduled June 9

The Clear Lake Area Space Society will meet at 7:30 p.m. in Rm. 207 of the Gilruth Recreation Center. Chuck DiFalco will give a slide presentation on his experiences with the space center's motion sickness studies. For more information, call DiFalco at x31701.

### AFCEA luncheon planned June 16

The Houston Space Center of the Armed Forces Communications and Electronics Association (AFCEA) will hold its monthly luncheon from 11:30 a.m. to 12:30 p.m. June 16 at the Holiday Inn on NASA Road 1. Featured speaker will be Lt. Gen. Melvin F. Chubb, Jr. Chubb is a command pilot with more than 5,000 flying hours who has completed 500 combat missions for a total of 1,000 combat hours. For more information or reservations, call Debbie Williams, 282-4952.

### Technical Societies' fifth awards banquet set June 17

The Clear Lake Council of Technical Societies will hold its fifth annual awards banquet at 6 p.m. June 17 in the Gilruth Center. Featured speaker will be John Garman, deputy director of mission support. Awards will be given in three categories: technical educator of the year, technical manager of the year and technical person of the year. Tickets are \$10 and reservations are required before June 14. Call Marcia Taylor, x30195 or Margie Robertson, x31442.

### Spaceweek National banquet to be held July 16

Tickets are now on sale for the Spaceweek National Banquet to be held July 16 at the Hobby Airport Holiday Inn. Keynote speaker will be Donald Fink, editor-in-chief of Aviation Week and Space Technology. Tickets must be purchased by June 17. For more information, contact Spaceweek Headquarters at 480-0007.

### Apollo 14 samples, site workshop planned Nov. 14-16

The Lunar and Planetary Sample Team will sponsor a workshop centering on Apollo 14 samples and the Apollo 14 site Nov. 14 to 16 at the Lunar and Planetary Institute. Topics to be discussed include: regional geology of the Apollo 14 landing site; Apollo 14 plutonic rocks; and the relation of Apollo 14 lithologies to the magma ocean hypothesis and other models of early lunar differentiation. Abstracts for contributions are due at the LPI by Sept. 15. For more information, call Jeffrey Taylor, (505) 277-9159 or Paul Warren, (213) 825-2015.

## Gilruth Center News

Call x30304 for more information

**EAA badges**—Dependents and spouses may apply for photo ID badges 6:30 to 8:30 p.m. June 6, 14 or 22.

**Defensive driving**—One-day course will be offered 8 a.m. to 5 p.m. June 18 and July 16. Cost will be \$20.

**Weight safety**—This is a required course for employees who wish to use the rec center weight room. The class will be offered 8 to 9:30 a.m. June 8 and June 23 for a \$4 fee.

**Men's Open C Softball Tourney**—Tournament will be June 11-12, and the entry fee will be \$95. The deadline for entries is June 8.

**Scuba**—A five-week scuba class will begin July 11 and meet 6:30 to 9 p.m. on Mondays and Wednesdays. Initial fee is \$45, and \$80 will be due at the first class.

**Physical Fitness**—Next course will be held July 5-Sept. 23, meeting at 6:30 a.m. on Mondays, Wednesdays and Fridays.

**Beginning Tennis**—Six weeks of lessons will start June 6 and meet from 5:15 to 6:45 p.m. on Mondays. Fee will be \$32.

**Ballroom Dance**—Professional instruction in beginning, intermediate, and advanced ballroom dancing will begin Aug. 4 and meet on Thursdays for eight weeks. Fee will be \$60 per couple.

## Cohen stresses technical excellence

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been made to increase the margins of the Orbiter, he said.

"If you go down to the Cape today, the solid rocket motors are basically stacked," he said. "If you look at the Orbiter bay, it looks like it's waiting to fly."

Strategic planning is giving JSC a better feel for its strengths and weaknesses, and is bringing a broad spectrum of people together through teamwork and communication.

"For the first time we've examined the full range of potential new NASA programs. We now better under-

stand their technical requirements, how they fit together and what the building blocks are for future programs."

Each organization has been given the jobs of improving communication with and among employees, helping employees understand and deal with their opportunities, clarifying organizational responsibilities and decentralizing power.

Center Operations is looking at ways to improve the office environment, including replacement of gray metal furniture with modular pieces, use of acoustic paneling, carpeting of some areas, and addi-

tion of video conferencing rooms, he said.

"I will work very hard to improve all these conditions that you feel aren't perfect at the Johnson Space Center today," he pledged.

Construction activity is booming at JSC, he said, with Bldg. 9B nearly complete and Bldg. 46 well under way. More is planned, including the new privately financed visitors center, an addition to the Mission Control Center, a Space Station training addition to Bldg. 5 (including a new parking lot), and a Space Station dynamics check-out facility, Bldg. 9C.

## Truly: solid fuel shortage being studied

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launch vehicle) programs will be back on their feet."

Truly said NASA's internal launch target date of Aug. 22 is not a public commitment, but a working date. "The actual projections change on a daily basis. When we'll really know where we are is when we get stacked, get mated and we go do the FRF (flight readiness firing). We are marching very well toward those events," he explained. "But the schedule has degraded through the month of

August, if you look all the way to the launch date, and our projections now are toward the end of August."

In his May 19 briefing, Truly said the FRF should be on the second or third week in July. The FRF is normally a 19.8 second test firing of the Shuttle's main engines after it is in place on the launch pad.

Other topics discussed during the briefing include:

The loss of about half of the United States' capability to produce ammonium perchlorate, the

result of a recent explosion at a Nevada factory, still leaves enough solid rocket motor fuel to fulfill the needs of the 1988 Shuttle flights. But NASA and the military must decide on a method of dividing the remaining ammonium perchlorate production, and study the possibility of expanding production at the one remaining ammonium perchlorate plant, before the effect of the lessened capability on 1989's nine scheduled flights can be determined, Truly said.



JSC Photo

**ASCENT ART** — Molly Springer and her husband, Astronaut Bob Springer, left, present a lithograph she created of the Space Shuttle to JSC Director Aaron Cohen. The print of a Space Shuttle launch, entitled "Ascent From the Maelstrom" symbolizes overcoming self-doubt in the return to flight and learning from the past without being paralyzed by it, she said.

## Ellington flyer looks ahead to space university

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business, especially someone coming in with a non-space background."

Before joining JSC in January 1985, Daues worked for 10 years as a geophysicist in the oil and gas industry. Her first job at JSC was in the Space Station Program Office working with design. She switched to her current job in December 1986.

Daues' \$10,000 tuition, room and board costs will be paid in full by a scholarship from the sponsors of the ISU. She will be given training leave from NASA for the duration of the session. "I'm looking forward to meeting people from all over the world, and maybe it'll give me a chance to brush up on my Russian and Japanese," she said.

## JSC earns award for Team Excellence

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of federal services. JSC's Team Excellence efforts have actively involved almost half of the employees and mobilized JSC's major contractors for support.

Joseph Wright, chairman of the President's Council on Management Improvement, presented the award at the first government-wide Quality and Productivity Conference held in Vienna, Va., June 1-2.

The award specifically cites effects and benefits that include:

★Significant progress in positioning JSC to accomplish its current NSTS and Space Station responsibilities and goals, and begin conceptual studies for the President's new initiatives for a lunar base and a manned Mars mission;

★Reliance on existing limited resources, primarily the commitment, dedication and extra efforts of employees serving on task teams and working groups in addition to their normal duties.

★Emphasis on the active invol-

vement of both civil service and contractor employees;

★More than 100 specific improvements that are either implemented or in the process of being implemented. Examples include enhancements to the small purchases system, a user-friendly supply catalog; a streamlined technical review process using computer displays and updating during review meetings; a "user's guide" for the action desk support a major support contract; and shared training among JSC and its contractors.

## Strategy teams get issue assignments

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relations, and create a process for periodically assessing the organizational structure.

The NSTS Issues Team, led by Engineering Deputy Director Max Engert, will plan a refurbishment/replacement funding approach, look at ways to cut the manpower needed to support the flight rate, define what is needed to effectively sustain engineering and operations, develop a list of Shuttle items that need improvement, and work on integrating operations and facilities.

The Space Station Issues Team being led by Gene Rice, special assistant to the Space Station Project Office manager, will establish ways of tracking and dealing with outside influences on the Station program, formulate a plan

for periodically assessing management mechanisms, and design a network that will keep all JSC supporting elements in touch with Station developments.

The Technology Issues Team, guided by Bill Huffstetler, head of the New Initiatives Office, will put together a centerwide means of assessing, developing and using new technologies and capabilities, develop an action plan for responding to special technology/capability needs, and create a process for emphasizing critical Space Station technology development.

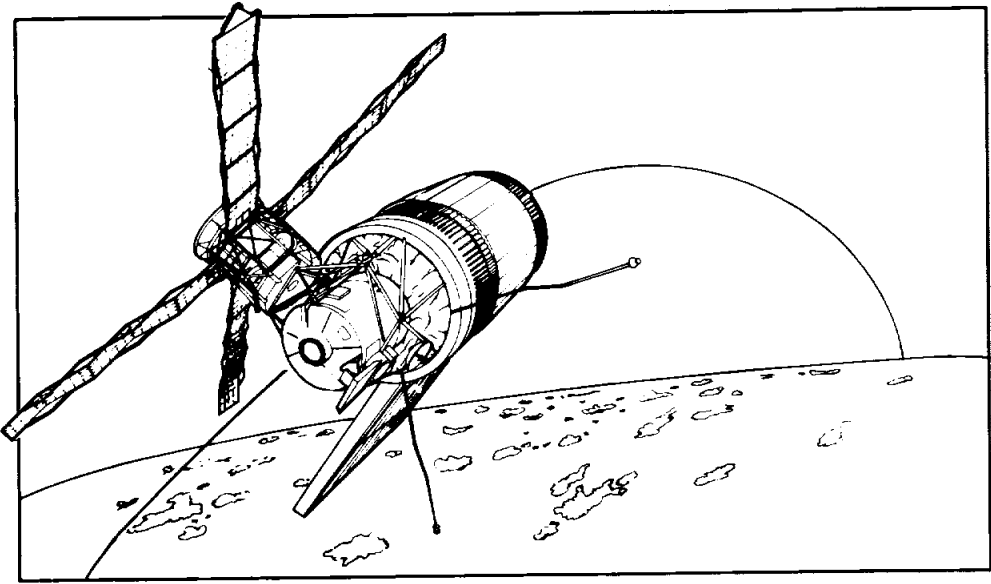
The JSC Resources Issues Team led by Administration Deputy Director Wayne Young will produce a plan for obtaining, maintaining and upgrading equipment and facilities needed for ongoing programs, and explore ways of peri-

odically assessing the state of the center.

The Human Resources Issues Team, with Harvey Hartman at the helm, will develop plans for obtaining and allocating billets, recruiting, developing and motivating employees toward JSC goals, helping employees develop their careers, and identifying long-term JSC skill requirements.

Members of the six different teams were chosen from diverse organizations to ensure that hard questions are asked, fresh approaches are developed, and redundant efforts are identified.

"I will know that strategic planning is really working when this center decides we're doing something that we shouldn't be doing," Weitz said.



# REMEMBERING SKYLAB

P. J. Weitz looks back 15 years at America's first space station



By James Hartsfield

Paul Weitz awoke 15 years ago this morning to marvel again at the small world below before starting another day aboard a darkened, partially powered space station that set the stage for what today is coming to fruition.

Now Weitz is the deputy director of JSC, and before he speaks about his days in space, he glances out the window at the Saturn V on display here, the giant rocket whose sister boosted his space station into a 269-mile-high orbit in 1973.

Skylab was the world's first space station. And Weitz, along with Pete Conrad and Joe Kerwin, was on the first crew, the crew that saved the crippled station, essentially rescued the mission and surpassed what was then the record for an extended stay in space.

"The major accomplishment of Skylab was simply in the doing," Weitz says. "The rule of thumb we used in the early space program was that we would advance our long duration exposure at the rate of doubling our previous experience. Basically, that's what defined our 28 days aboard Skylab."

Those 28 days paved the way for the 59-day and 84-day missions that followed, which in turn provided the roots of today's Space Station Program. Weitz' crew deployed a makeshift parasol to shade Skylab from the Sun's overwhelming heat, in place of a meteo-

roid shield lost during launch. Halfway through the mission, they loosened Skylab's only remaining solar wing and allowed it to deploy.

"Before then, we didn't have hot water. We minimized heating food. We turned lights out ... the place was almost like a cave because we kept turning lights out," Weitz says. "Once we got the solar array out, we had hot water, we could take showers. It just became a much more pleasant environment."

In fact, Weitz was the first man to shower in space, though "showers in space are a pain in the neck," he says. "But we enjoyed it; we were allowed three quarts of water. We got to take one shower a week whether we needed it or not. And we took advantage of every opportunity."

Skylab became home, despite zero-G. "Humans are pretty adaptable. It was home; we knew it was going to be home, once we got settled in, once we got our work going," Weitz says. "Zero-G's a great play environment, but it's a lousy living environment. It's nice to have coffee stay in the cup, instead of having to squeeze it out. It tasted all right, but still ..."

Weitz understates his mission as "the world's best camping trip." But when he entered Skylab, the station was anything but inviting, dark due to low power and heated to an internal temperature of 130 degrees Fahrenheit. Weitz' first hours in

space, on May 25, 1973, were spent hanging from the hatch of an Apollo Command Module for an hour and a half, grappling unsuccessfully to free the solar wing with a 10-foot hook.

When his mission left, the station was alive and cool, with a temperature averaging near 75 degrees. During 404 orbits, they had taken 25,000 photographs of the Sun, 7,500 photos of Earth, made the first space studies of a solar flare and carried out a variety of other experiments. And after their return to Earth June 22, they recommended exercise be increased for extended stays in zero-G, a practice now proven invaluable for healthy life in space.

Like the thousands of observations from Skylab now in use in Space Station planning, Weitz' memories of his mission are vivid. It opened his eyes to a different view of the world. "If you had summit conferences like the one in Moscow, if you had them in orbit, the thing that strikes you is that you watch the world go by underneath — and those little pink and yellow and blue and green lines that appear on maps aren't there," he says. "You don't see those artificial, man-made boundaries that sometimes cause so much trouble. And you don't really care."

Skylab was an exploration, an adventure, a beginning, Weitz says. Space Station will be a tool for 30 years, and among its benefits will be carrying on

the rudimentary findings of Skylab in materials processing, life sciences and studies of the Earth and space. "Also, Space Station's the application of the things we learned," he explains. "You can see it in how they package things, how it's arranged. For example, I think we convinced folks you need a communal meeting area, like the ward room. You need a private sleep area. You need windows to look out at the world; we don't argue about those things any more. We had to fight tooth and nail to get the ward room window in Skylab."

But the benefits of projects like Skylab go farther than those that can be easily labeled, he says. "In my mind, there's an intangible benefit of the manned space program in the fact that it is an exploration program. If a country just turns inward to solve all its own ills within its own borders without ever having some sense of adventure somewhere along the line, pretty soon I think you'll stop growing."

All of his memories of Skylab are pleasant, Weitz says, and he rejects the idea of his flight crew accepting credit for saving the program. "I was part of a good crew; we certainly have a sense of pride in what we accomplished. By crew, I mean Joe and Pete, but also the whole crew it takes to operate a mission around here, the flight control team, everyone," he adds. "I'm proud of the whole national effort as a matter of fact."



Top: Paul J. Weitz, Skylab 2 pilot, mans the control and display console of the Apollo Telescope Mount in the space station's Multiple Docking Adapter. Right: Weitz assists scientist-astronaut-test subject Joseph P. Kerwin with the blood pressure cuff for an experiment measuring cardiovascular adaptation in orbit. Above: Skylab 2 Commander Charles Conrad, Jr. trims Weitz's hair as Weitz uses a vacuum hose to collect the clippings.

# Roundup Swap Shop

## Swap Shop ad deadlines change today

Starting today, the deadline for Swap Shop ads is 5 p.m. every Friday, two weeks in advance of the desired publication date. A revised JSC Form 1452 will replace the December 1984 version; copies of the new form may be ordered from JM86 using JSC Form 614. The new form also is available in the Xerox STAR System forms store.

Ads to be published in the June 17, 1988, issue of Space News Roundup must reach Bldg. 2, Rm. 147, by 5 p.m. TODAY. Ads for the June 17 paper will be accepted on any Form 1452.

### Property & Rentals

Sale: Friendswood 3-2-2, large LR, cathedral ceiling, covered patio, good neighborhood. 482-3697.

Lease: League City, Bayridge 3-2-2A, no pets, dep., ref. 488-1301.

Sale/lease: Honolulu, Hawaii, near Wakiki Beach, 1 BR time-share unit, Royal Hawaiian Adventure Club. Bob Merrifield, 333-2437 or 484-1900.

Rent: University Trace condo, 1 BR/study, W/D, \$375/mo. Russ, x34742.

Lease: El Dorado Trace condo, 2-2, W/D, FPL, fans, wet bar, tennis courts, pool and sauna, avail. June 1, \$395/mo. Pete, x36228 or 480-4525.

Lease: Baybrook condo, 1 BR, W/D conn, \$275/mo., dep. 538-2299.

Sale: Pipers Meadow, 3-2-2, 1550 sq. ft., \$65,000, FHA 10.5% fixed rate, assumable. Sam, x31597 or 488-9742.

Lease: Meadowgreen 3-2-2, new paint, new carpet in LR, near schools, \$625/mo., dep. 486-5915.

Sale/lease: Seabrook, 5-2-2, 2160 sq. ft., near schools, park, pool, \$650/mo., \$650 dep., \$72,000. D. Hinson, 479-1004 or 476-8025.

Sale: League City, 3-2-2, cul-de-sac, landscaped, low equity, FHA 10% fixed assumable. David, x35464.

Rent: 1 BR condo, FPL, new carpet, paint, all appli., \$375/mo. Jennifer, 930-9318.

Trade: Kingwood 4-2-5-2, 2450 sq. ft., for similar size in Clear Lake area. Mike, x32342 or 359-1726.

### Cars & Trucks

'87 Ford Aerostar Cargo Mini-Van, A/C, V-6 eng., stereo, 4-yr. ESP warr., 19K mi., \$9000. 334-5405.

'74 Plymouth Duster, needs major eng. work, \$100. 538-2299.

'74 Mercedes 450 SEL, green, leather, sun roof, needs mech. work, \$5900. J. Kinsey, x32271 or 486-0421.

'84 Ford Super Cab F150 XLT P/U, camper, blue/yellow, \$7400. George, x30889 or 480-9810.

'74 LeBaron Imperial, leather elec. seats, restorable, \$150 cash. 996-9646 or 282-4271.

'85 Honda LX 4 dr. auto., all power, cruise, Michelins, moon roof opt., ex. cond., \$8950. x30092 or 481-3637.

'86 Toyota Corolla SR5 sports coupe, tinted windows, cruise, A/C, AM/FM radio, PB/PS, 5 spd., low mi., ex. cond., \$9995. Pat, x34252 or 486-6134.

'73 Chev. Chevelle, 4 dr., 350 V-8, auto., PS/PB, A/C, AM/FM/cass., some rust, \$650. Jonette, 486-5798.

'79 Camaro, new paint, black/red int., new tires, ex. mech. cond. 280-7625 or 486-7590.

19' Travel trailer, A/C, self-contained, shower & tub, bed, table, ex. cond., \$3500. 495-2027.

'83 Toyota Corolla wagon, auto., A/C, AM/FM/cass., 51K mi., ex. cond., \$4500. 480-9433.

'79 Toyota 4x4 P/U, new tires, camper top. 482-1126.

'78 Chevy Camaro, rebuilt 307 V-8, auto., PS/PB, needs minor work, \$2500. Frank, x31695 or 280-9663.

'81 Mazda 626, 4 dr., auto., AM/FM, A/C, 41K mi., good cond., \$4100. Don, x34543.

'86 RX-7, sports model, white, maroon int., AM/FM/cass., ex. cond., \$11,995. OBO. Jeff, x31470 or 996-7097.

'79 280 ZX sports coupe, 5 spd., A/C, rem. sunroof, LeBra, new clutch/brakes, AM/FM/cass. Kay, x34826 or 331-3379.

'80 Buick Regal, blue, AM/FM, int. ex. cond., some rust, 96K mi., \$1000. Susan or Kay, x34845 or 331-3379.

### Cycles

'82 Yamaha 250 SR, ex. cond., 3600 mi., \$600, OBO. Todd, 282-3475 or 333-2861.

'80 Honda 750 custom, mags, low mi., \$1250. x30092 or 481-3637.

'79 Yamaha XS1100 special, 14K mi., shaft-drive, new tires/batt., ex. cond., \$1100. x36440 or 326-2664.

'82 Honda Sabre, V-45, custom sports tourer, black & silver, fairing, lowers & bags, \$1300. Richard, 480-0880.

'84 Honda Aspencade, 23K mi., new tires, floor boards, bumper rails, cruise control, trailer hitch, ex. cond., \$4200. 943-0113.

### Boats & Planes

15' Starfish-like dagger-board, fast wood hull, single sail, all rigging plus trailer, \$500. x36440 or 326-2664.

16.5' Sidewinder ski boat, 75-HP Johnson, pwr. tilt, tow bar, new paint, 4 new seats, new instruments, new carpet, AM/FM radio, galv. trailer, skis, \$3500. Ben, x31588 or 488-1326.

Aitken 911 sailboat, ex. cond., \$250, OBO, board only. Grady or Colleen, 480-3232.

18' Catamaran AMF trac sailboat, double trapeze, cat tilt trailer, \$3100. 333-3056.

Sunfish sailboat with galv. trailer, never used, \$2200, now \$1200. 326-1278.

26' Pearson sailboat, O/B, \$8000, OBO. Tom, 332-7048.

15' Catamaran with galv. sportsman trailer, new trampoline, will show how to rig and tune, \$1,000, OBO. Ed, x31927 or 554-6154.

### Audiovisuals & Computers

HP 28C calculator, 128K ROM, built in functions; symbolic algebra/integration, Taylor series, plots, complex numbers, matrices; printer port, programmable, manual, case, \$150. Boykin, x37341 or 326-1267.

Leading Edge XT, 20MB hard disk, EGA, hi-res. color monitor, 1-2-3, Word Perfect, pro-design, \$1995, OBO. John, x36484 or 486-1186.

Texas Instrument Silent 700 printer w/extra keyboard, \$50. 499-3357.

Epson FX-85 Dot Matrix printer, with draft and near letter quality mode, parallel input and documentation, ex. cond., \$225. Gaudiano, x38320.

IBM-AT (Western-Digital) hard disk controller, new, never used, \$125. Frank, x36221.

4.77-8 MHz XT Clone, 640K RAM, 360K floppy, 20MB fixed disk, Mono/graphics Hercules compatible, clock, serial, parallel, Joystick ports, new, \$900. Scott, x36818 or 280-9656.

64K PC with 97-key multitouch keyboard, Epson LX-90 printer, high resolution monitor, \$150. 333-1427.

### Household

Solid mahogany desk, good cond., \$150. J. Kinsey, x32271 or 486-0421.

Woodgrain breakfast table, 3 chairs, \$30; single size daybed w/cover, \$10; small wood TV stand, \$5; bar stool chair, \$30. 488-7113.

Antique oak dressers; book shelf/study table; contemporary oak bedroom set w/HB; book shelves, Futon w/frame. George, x30889 or 480-9810.

Single bed comforter with dust ruffle, mauve, blue & off-white, pillow cover, twin bed quilted bed spreads. Boykin, x37341 or 326-1267.

Couch, earth tones, \$85. Scott, x34437.

Danish living room set, gold; couch, 2 arm chairs, rust, \$140. 474-5721.

Kenmore washer & dryer, \$200; coffee table, end table, \$75; twin beds w/box springs, mattresses, headboard, footboard, \$50. Pat, x34252 or 486-6134.

Eureka vacuum cleaner w/attach., \$50; reclining couch and matching loveseat, \$400. 488-5218 or 280-2047.

Rectangular, wood and Formica, butcher-block dinette table and 6 chairs, \$125. 480-0513.

Frigidaire 20.9 cu. ft., refrig./freezer, \$300; Whirlpool 15.2 cu. ft. upright freezer, \$250; Whirlpool 25.2 cu. ft., side by side refrig/freezer, \$350; Hammond organ, \$200. Saing, 332-1727 or 282-1849.

Amama microwave oven, lg. sz., ex. cond., \$150. Jan, x32262 or Bill, x33838.

Sony stereo system w/cabinet, speakers w/stands, dual cassette, high spd. dubbing, 5 band equalizer, turntable, ex. cond., \$450, OBO. Lucille, x31299.

Queen size sofa sleeper and loveseat, \$500; glass top coffee table; end tables, \$500. Barbara, 282-4025 or 331-5346.

2-piece sofa, \$50; twin size mattress/box springs, \$50; vacuum cleaner, \$30. Sharon, x38451.

Refrig., 23 cu. ft., almond, \$200; Whirlpool washer, white, \$75; comb. washer/dryer, \$25; microwave, \$50. X37132 or 480-1551.

Wood folding crib/playpen, w/pad, \$30; card table, 4 chairs, \$50; folding alum. table, 3' x 5', w/pad, \$35. 280-2636.

Antique secretary desk, drop front, hidden compartment, ex. cond., \$1500. Verna, x32209.

Console fruitwood finish, ex. cond., \$750. 488-9005.

Sofa and loveseat, earth tones, ex. cond., \$800, now, \$300. Edi, x30938.

GE portable 5" color TV, w/stereo, AM/FM/rem. cass., \$190. C.W., 282-1871 or 280-8796.

9-drawer dresser/bureau, solid pecan, w/attach. mirror, \$185, OBO. Cindy, x38801.

Simmons baby crib and mattress, \$200. 870-0990.

Sears small, old wind-up record player w/records, \$200; old fashioned school desk, \$40. 482-1505.

Pioneer 35 watt stereo receiver, Sharp cass. deck w/Dolby, Empire 8 trk tape deck w/2 speakers, \$100. 554-2267.

King and queen mattress and box springs, \$150 and \$100, or \$225 for both, OBO. 488-4010.

Microwave, \$150; file cabinet, 2 drawer, \$10; 9' couch, silver-gray, \$30; loveseat, blue & gray, \$25; Emerson 5" B&W TV, AC/DC, \$25. 488-0710.

Orig. 1962 Gordon & Smith hot curl surfboard, 7.5', \$200; new compact disc, \$10 ea. 488-0710.

### Wanted

Want repairable refrig., freezers, window A/C units, Aubrey, x36580 or 339-1402.

Want erector sets, American Flyer trains or other A.C. Gilbert toys. K. Klein, 723-5170.

Want men's lg. frame mountain multi-spd. bike in good cond. 532-4006.

Want one 13" tire rim to fit '83 Toyota. Mark, x30131.

Want two twin beds, sep. or bunk, in good cond., reasonably priced, need by June 1, 1988. Merrell, x37570.

Want volunteers to give "intelligent" tours to international groups of students on the afternoon of Friday, Aug. 26, tours will include WETF, 9A 1G Trainers, MCC, Space Station Moc Ups, Skylab Moc Ups, and Bldg. 2, visitors center. Peter, x30850 or 334-2081.

Want freezer, frost free, 15 or 19 cu. ft., must be in very good running cond. and inexp., ext. cond. is not important. Earl Rubenstein, x34807 or 326-2354.

Want babysitter for 1 yr. old in our CLC home, Mon-Fri, light housework, start in Aug., ref. Dave or Linda, 480-9545.

Want outboard motor, 20HP-50HP, Johnson or Evinrude. Aubrey, x36580 or 339-1402.

Need child care for my 15 mo. old son in your home. Small or no group preferred. Heritage Park area. Cathy, x33851.

Want Weber carb. conversion for Datsun 240Z. 282-3479 or 532-1112.

Need ride to work, Mon-Thur from Meadowbend to Rockwell on Gemini, arr. at 7:30 a.m. and leave 4:40 p.m., share exp. G. Musso, 282-5211.

Want non-smoking female to share 2-2 condo at El Dorado Way, \$200/mo., 1/2 util., pool/tennis court. x37663 or 482-7775.

Player piano, circa 1929, needs speed bellows cloth replacement, collector item, \$400. Fred, 480-7172.

King trombone w/case and stand, \$200. 532-2059.

King trombone w/case and stand, \$200. 532-2059.

### Musical Instruments

Player piano, circa 1929, needs speed bellows cloth replacement, collector item, \$400. Fred, 480-7172.

King trombone w/case and stand, \$200. 532-2059.

### Photographic

Bentley BX-720 color movie camera, new, \$30. Bonnie, x34248.

Minolta XG-1 camera; Minolta MD Rokkor-X 45mm lens; Minolta auto 118X flash; carrying & travel cases, Minolta photog. books. \$225, OBO. Jana, x31653 or 532-3008.

### Pets & Livestock

2 free cats to loving home. G. Musso, 282-5211.

Golden retriever puppies, AKC, \$150. Mike, x32342 or 359-1726.

Gray fem. cat, 10 mos. old, spayed, has shots. Gayle, x31429 or 482-1909.

AKC registered Chow Chow puppies, creams & cinnamon, will be six wks. old on 6/4; AKC registered cinnamon Chow Chow for stud. Beverly or Lisa, 488-3050.

Free, 4 mo. old fem. dog, black w/white & brown; mixed breed, short hair, has shots. Denise, 280-1500, x3065.

AKC Doberman pups, born 4/16/88, black/tan, M/F, \$125/\$150; 1 red, F, \$280, tails cropped. x36953 or 482-4343.

AKC male cocker for stud, fee or pick of litter. Tamela, x36159 or x36155.

### Miscellaneous

Remington Mod. 88, 243 Win., ex. cond., \$325. 332-5057.

Remington Mod. 740 "Woodsmaster", 30-06 semi-auto rifle, ex. cond., \$285. Scott, x34437.

12' alum. boat, trolling motor, swivel chairs, gun cabinet, Whirlpool dishwasher, ceiling fans. 482-1126.

Man's 14K gold nugget Seiko watch, new, \$850. 482-1582.

Radio Shack 12 volt power supply, UL, 1.75 amp/120 VAC input, 13.8 VDC output, \$20. Karen, x34284.

Roller derby skateboard, \$5; roller skates, sz. 5, \$5; roller skates, sz. 3, \$3; girls bicycle, \$12. 488-7113.

Dog house, \$35; window shade 36x48, \$5; engineering books, \$2 ea. Rockettes uniform item. 488-7113.

Exer-bike exercise bike, 4 mos. old, folds compact, \$40; Kawasaki motorcycle racing leathers, \$50; motorcycle helmet, lg. blk., \$40. Jana, x31653 or 532-3008.

Go Kart 4 1/2 HP, \$115; 10 gal. fish tank w/extras, \$35; boys BMX 20" bike, \$20; Toro lawnmower, \$60; gas edger, \$60. 532-2059.

Dino Ricco rabbit fur jacket, Jr., lg., solid pelt sienna brown, \$50. Karen, x34284.

Carpet, 9' x 12', antique white, \$45; full face, large motorcycle helmet, \$10. 532-4006.

Fortress scientific 655 FS power drive wheelchair, less than one yr. old. Don Sawyer, x39421 or 484-2597.

Miniature Victorian doll house, assembled, \$85. Donna, x30479 or 944-5624.

New air shocks for '84 or newer Celebrity station wagon, sedan or coupe, \$75, OBO. 282-4271 or 996-9646.

Wards 5 HP tiller, \$150; '74 Chrysler Imperial, not running, all power, \$150, OBO. 282-4271 or 996-9646.

'70-'73 Firebird, T/A Endura front nose, \$100; '70-'76 T/A hood, \$100; '74-'76 fiberglass Firebird, T/A nose, \$75; '70-'73 rear bumper Firebird, T/A, \$20;

'75 grilles, \$40; '74 455 complete engine, \$150; '70-'76 Firebird hood, \$75; '79-'81 rear spoilers complete, \$80; '75 blue int., \$100. 337-3690.

Sears exer. bike FXC 6000, \$50; Wards frostless upright freezer, 18 cu. ft., \$250; beer cooler, "beverage-air" w/glasses and 2 heads, \$250; 2 speakers, KLH, \$35. 333-4374.

25" RCA color console, 10 yrs. old, needs repair or great for parts, free if you pick-up. Cathy, x33851.

Heavy duty bumper, trailer hitch, \$50. 282-4271.

Sears garage door opener, 1/2 HP remote and key switch entry, \$100; LeBra for '82-'84 Trans Am, \$35. 499-3357.

Colt Python, stainless, holster, case, cleaning kit, ammo. \$550. John, x36484 or 486-1186.

Men's med. ski vest, \$20; cordless telephone by Muraphone, \$20. Bob, 488-0397.

Baby car seat, \$40; baby stroller, \$15. x31588 or 488-1326.

Jane Fonda's new workout video, VHS, beginner and adv. class in one cass., \$25. Rose Marie, x37163.

Delmar wet suit, full size Farmer John style, \$100. Clayton, x35502 or 532-1903.

Golf 1, 3, and 5 personalized woods, Persimmon heads and extra stiff graphite shafts, \$200. Debi, 280-5225.

Ajay indoor stationary bicycle, \$20; Riccar sewing machine w/carrying case, \$50; 2 oak & wicker bar stools, \$5 ea. 333-1427.

Teen willing to babysit for summer mos., reasonable rates. 280-9442.

Alum. camper for Toyota truck w/wooden cabinets, bed liner & built-in speakers. BO. Audra, x39174 or 534-3837.

Day care for an infant or toddler in a private home, Hwy. 3 and El Dorado, \$85 per wk. 480-9646.

'69 Firebird or Camaro parts, r.h. door, \$50; Rally gauges, \$100. Russ, 488-5546.

Datsun 260Z parts, bumper, grille, carburetor, bumper struts, apron, hub caps, small towing wheels, more. C.W. 282-1871 or 280-8796.

Wet/dry shop vac, \$25. 333-2395.

5 new tires, Dick Cepek off roaders, 27-950-15, for small 4x4. Mike, 282-4180 or 996-9440.

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## Caring Shows

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## Cookin' in the Cafeteria

### Week of June 6 — 10, 1988

**Monday** — Chicken & Rice Soup; Wieners & Sauerkraut, BBQ Ham Steak, Steak Parmesan, Beef & Macaroni (Special); Green Beans, Carrots, Au Gratin Potatoes. Standard Daily Items: Roast Beef, Baked Ham, Fried Chicken, Fried Fish, Chopped Sirloin. Selection of Salads, Sandwiches and Pies.

**Tuesday** — Tomato Soup; Potato Baked Chicken, BBQ Spare Ribs, Mexican Dinner (Special); Squash, Broccoli, Ranch Beans, Spanish Rice.

**Wednesday** — Seafood Gumbo; Liver & Onions, Baked Turbot, BBQ Ham Steak, Baked Meatloaf w/Creole Sauce (Special); Beets, Brussels Sprouts, Green Beans, Whipped Potatoes.