

Gone for EVA



F-Troop adds new spacecraft to the fleet

During the usually quiet sleep shifts for Shuttle missions, it is not unusual for the planning team in Mission Control to request a replay of the day's downlink television. On Thursday night and Friday morning of last week, however, the spectacular video from Day 4's spacewalk was replayed not once but three times.

That was one indication of the unbridled glee with which members of the JSC team — employees of Hamilton Standard and the Crew Systems Division in particular — greeted the exploits of STS-6 Mission Specialists Story Musgrave and Don Peterson during and after their flawless four-hour EVA.

"Well, how's that for a mission?" asked Lt. Gen. James A. Abrahamson, Associate Administrator for Space Flight, to a round of applause during a post-landing briefing at the Dryden Flight Research Facility. "We did not have to do any significant replanning of the mission," he exulted. "It was flown exactly as planned, including a marvelous EVA."

Indeed, aside from the initial grave concern over the fate of the Tracking and Data Relay Satellite on flight day one (See related story, page), the mission was among the most trouble free yet flown. Of 53 planned scientific and engineering objectives, 52 were met. The only

one not completed was an air sample test inside the Orbiter *Challenger* itself.

For Orbiter Vehicle 099, the flight was a vindication of sorts. Problems with the main engines and with pre-flight contamination of the TDRS had caused a two-month delay. "Getting the flight off has been a particular problem," said Shuttle Program Manager Dr. Glynn Lunney. "We knew it would be difficult and to a certain extent it was. But the reflights of 099 will go much better. There is a feeling of having broken through with this one."

And after five days, 23 minutes and 42 seconds aloft, the bird was

very, very clean. "The vehicle looks like we just rolled it out of the OPF (Orbiter Processing Facility) at Kennedy," said KSC Ground Operations Manager Jim Harrington. "It's just a very clean ship."

Abrahamson said despite the newness of the vehicle, the number of anomalies recorded by mission engineers is less than for any of the five flights of *Columbia*, in a business where used spacecraft are generally considered better understood and that much more reliable. There were 82 anomalies recorded after STS-1, a number which was pared down to 27 after STS-5. For STS-6, there were only 22 anomalies recorded. "Compared to what we've

seen in the past," Harrington said, "it's probably a lot cleaner than any of the *Columbia* flights."

Tile damage to 099 was minimal but noticeable. Three Advanced Flexible Reusable Surface Insulation (AFRSI) thermal protection blankets were blown loose, one lost completely, on the left side Orbital Maneuvering System (OMS) pod, and three were also lost from the right side OMS as well. Abrahamson said AFRSI installation on Orbiter 103, the *Discovery*, is now progressing at the rate of 10 or 12 each day, and expects the repair of those on *Challenger* will add little if any time to the tight turnaround process

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A close save

Fearing the worst, controllers bring TDRS back from the brink

The night had been routinely quiet for those following the STS-6 mission, but around 4:45 a.m. CST, some 16-1/2 hours into the flight, the continued silence began to turn ominous.

Ground controllers in Houston and at the remote payload operations control rooms in Sunnyvale, California and White Sands, New Mexico, were awaiting word on the second major engine firing of the Inertial Upper Stage (IUS) which was to carry the first Tracking and Data Relay Satellite (TDRS) into geostationary Earth orbit.

The burn, SRM-2, was scheduled for 4:41 a.m. and was to circularize the then elliptical orbit into a circular equatorial orbit of 22,300

miles. "We are still waiting in Mission Control for confirmation of the results of that IUS burn, the final burn of the solid rocket motor," Public Affairs mission commentator Steve Nesbitt said shortly after 5 a.m. over the NASA commentary circuit.

But no definite word was to come for several more hours because telemetry had ceased from the IUS/TDRS combination, and an already tense situation began to turn grim. An hour later, intermittent signals from the TDRS, radar and other indicators led to a statement by Air Force IUS Program Manager Lt. Col. Ralph Tourino that the IUS/TDRS combination was still mated and most likely

tumbling. At that point, with short-life batteries wearing down on the IUS and no responses to constant telemetry commands from the ground, the outlook for TDRS-A was bleak.

By 8 a.m., most of the world was waking up to that news, and in the NBC trailer next to Bldg. 2 Visitor Center, correspondent Roy Neal was telling his Today Show audience, "It will take a miracle to save this spacecraft." Almost as he was speaking, a miracle came.

At about that time, one of two things happened; experts still are not sure which. Either through the engagement of an automatic timing mechanism which separated the TDRS and the IUS, or through an

eleventh-hour acknowledgement of repeated telemetry from the ground, the IUS separated from the satellite and immediately there was a decided turn for the better.

Now on its own, the TDRS was able to stabilize its attitude and stopped tumbling. Ground controllers began nominal commanding sequences to deploy the solar arrays and two antennas, which was completed by 8:25 a.m.

Back in the NBC trailer, Neal had interviewed STS-3 Pilot Gordon Fullerton for Today's final east coast newscast when it looked as if the satellite was lost. Fullerton was scheduled to meet French astronauts Jean-Loup Chretien (who flew aboard the Soviet Salyut-7

last year) and Patrick Baudry at Hobby Airport, but at Neal's suggestion stayed to help bring the good news to Today's large west coast audience.

By 10 a.m., Tourino, NASA TDRS Manager Robert Aller and Marshall IUS Program Manager Sidney Saucier met with reporters to fill in details on the close save.

TDRS-A, Aller said was in an elliptical orbit with a drift rate of about 110 degrees per day to the east or between four and five degrees per hour. The numbers for that orbit, since refined, show TDRS-A is now in a 21,950 x 13,540 statute mile orbit with a velocity of 13,458 feet per second at perigee,

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Scholarship available to NASA dependents

The NASA College Scholarship Fund, Inc., began late last year largely through an unsolicited donation by author James Michener, will offer two \$1,500 scholarships this spring to children of NASA employees or NASA retirees, but the time to apply is short.

Deadline for scholarship applications is May 6, according to JSC Planetary and Earth Sciences Division Chief Dr. Michael B. Duke, Chairman of the non-profit fund.

The scholarships were set up after Michener donated some of the proceeds of his latest book, "Space." Michener said he held the people of NASA in such high esteem for their good work through the years that he thought it impor-

tant to make some contribution to them through the education of their children.

As a direct result, the NASA College Scholarship Fund, Inc. was incorporated under the laws of Texas on Oct. 20, 1982 to receive contributions and use them and income from those monies exclusively for charitable, educational and scientific purposes: namely, the awarding of college scholarships to fulltime students who are dependents of current or retired employees of NASA and dependents of current reimbursable detailees to NASA. In addition, college scholarships may be awarded to fulltime students who are former dependents of NASA

employees or former reimbursable detailees to NASA who died in the line of duty for the Agency.

Two scholarships will be awarded for the 1983-1984 school year during the first year of the program. Applicants must be pursuing a course of study that will lead to a recognized undergraduate degree at an accredited college or university in the U.S. Additional scholarships are expected in coming years.

The renewable scholarship cannot exceed \$1,500 per year per dependent to a maximum of \$6,000 over six calendar years. The scholarship is open to the children of all NASA employees and is not limited to JSC.

All applicants must be graduated from an accredited public, private or parochial high school or be currently enrolled in college with good academic standing. Appli-

cants must have a combined high school and college (if any) grade point average of 2.5 on a 4.0 scale or the equivalent.

Dependents are defined as students currently lawfully claimed as dependents on his or her federal income tax return by a current NASA employee or a retired NASA employee or was so claimed at the time of death of a former NASA employee or former detailee who died in the line of duty for NASA. Employees must have been on duty with NASA for at least two years as of the January of the scholarship year. There is no minimum period of employment for former employees or detailees who died in the line of duty.

After meeting those minimum requirements, applicants will be ranked based on academic preparation (i.e. high school and any

college grades, high school graduating rank and pattern of courses); school activities; community activities; performance on such tests as the SAT and the ACT; written recommendations from instructors, counselors, community leaders or any other individuals not related to the applicant (limit of three); and a one-page statement of academic purpose by the applicant.

High school students must furnish an official transcript of their grades and an official record of their scores on the SAT or the ACT tests.

Application forms are available in Bldg. 1, Room 840. For more information, call x5410. All completed forms, transcripts and other materials must be sent in a sealed envelope directly to BE5/Scholarship Committee, NASA College Scholarship Fund, Inc., at JSC. They must arrive no later than May 6.

Bulletin Board

Ave. B East gate to be closed

Bridge and road construction on NASA Road 1 recently caused the limiting of traffic through the Ave. B East gate. Now, with construction intensifying on NASA 1 and with the construction of a new northern perimeter road around the Center to begin this spring, the gate is being totally closed to all traffic for about the next 12 months. All commercial vehicles should now enter the Center through the Ave. B West gate off Space Center Blvd.

Symphony to present Russian works

An "All Russian Concert," featuring works by Tchaikowsky, Rimsky-Korsakoff, Borodin and others will be presented by the Clear Lake Symphony at the University of Houston/Clear Lake City beginning at 8 p.m. April 16. General admission is \$3 and tickets are \$1 for students and senior citizens. The program will include Tchaikowsky's "Swan Lake Suite," Rimsky-Korsakoff's "The Russian Easter Overture," Borodin's "The Steppes of Central Asia," Khachaturian's "Three Dances from Gayne" and "Polka Suite from The Golden Age Ballet" by Shostakovitch. For more information, call 488-9390 or 488-9288.

Gutenberg Bible on display

One of the rarest, most historic and most expensive printed works in the world will go on display at the Houston Museum of Natural Science May 12 through June 2 in Jones Gallery. The Gutenberg Bible, which belongs to the University of Texas at Austin, is touring the state as part of the celebration of the University's centennial. This Bible was purchased by UT in 1978 for \$2.4 million and is one of only five complete specimens in the U.S. The Gutenberg Bibles — there are 48 copies remaining, only 21 of which are complete — are generally regarded as the most important printed works in history. They were the first to be set with movable type, an invention regarded as giving humankind the means to educate the masses. The Bible was printed in Mainz, Germany and was completed in 1455. The Gutenberg Bible on display at the Museum is a paper copy and has a calfskin binding over wooden boards which dates from about 1600. Special programs and tours will run along with the Bible display itself. The Museum is located in Hermann Park at 1 Hermann Circle Drive. The hours are Tuesday through Saturday from 9 a.m. to 5 p.m., Sunday and Monday from noon to 5 p.m. and Friday evenings from 7:30 to 9 p.m. For more information, contact the Museum at 525-4273.

Federal Women's Week observance planned

The Sixth Annual Federal Women's Week observance at JSC will be held April 26 through 28 at the Gilruth Recreation Center and the Bldg. 2 Auditorium. The program April 26 begins with a luncheon at 11:30 a.m. at the Gilruth Center. Houston broadcaster and author Ray Miller will deliver the keynote address at 12:15 p.m. The April 27 program will feature two sessions: "Thinking on your Feet" at 9 a.m. and "Stepping Stones to New Frontiers" with Dr. Kathryn D. Sullivan at 1 p.m. The April 28 sessions, to be held in Bldg. 2, include "Winning Script vs. Losing Script" with Dr. Warren Chaney at 9 a.m. and "Medical Spinoffs from Space" with Dr. Charles K. LaPinta at 1 p.m. reservations are required only for the opening day luncheon. Tickets will go on sale April 6. For more information, call Shirley Price at x4918.

Management symposium to be held

This year's National Contract Management Association Educational Symposium, being held April 12 and 13 at the Nassau Bay Hilton, will focus on the field of government acquisition. The conference is a must for all government and contractor personnel who need an understanding of coming changes in procurement regulations and practices. For more information, contact Randy Parker at 488-9005.

Astronomy Day is April 23

Rice University and the Houston Astronomical Society will co-host Astronomy Day on the University campus April 23. All activities will be held between noon and 10 p.m. at the Space Physics Bldg. at entrance nine off Rice Blvd. Events will include lectures and demonstrations on astronomical topics and instructions on telescope usage. Weather permitting, several telescopes will be available for viewing the Moon, planets, stars and other celestial objects. The observance is free and open to the public. For more information, contact the Houston Astronomical Society Newsline at 661-6180.

Asteroid study effort being organized

When the minor planet Pallas sweeps between a moderately bright star and Earth on the night of May 28, local astronomers hope to have a network of observers from Dallas to Corpus Christi in place to learn more about the asteroid.

Pallas, the third largest asteroid in the solar system, is 300 million miles from Earth, and its passage in front of the star 1 Vulpeculae will present a rare viewing opportunity for amateur and professional astronomers alike. Experts say that only once each 60 years might one of the largest four asteroids be expected to occult a star of 5th magnitude or brighter. 1 Vulpeculae is a 4.7 magnitude star. Magnitude is a measure of the relative luminosity of a celestial body. The smaller the number, the brighter the object. On this scale, the Sun has a magnitude of -26.8, the full Moon -12.5 and Venus about -4.3 at brightest. The faintest stars visible on a clear dark night are of

about the sixth magnitude.

Thus 1 Vulpeculae presents a moderately good backdrop from which astronomers may learn more about the asteroid Pallas. By observing from different locations when the asteroid passes in front of the star and blocks out its light, astronomers hope to obtain a detailed two-dimensional profile of its diameter and shape.

Since Pallas, like most asteroids, reflects only a small amount of the sunlight which strikes it, astronomers are not able to image the asteroid, other than to photograph it as a faint point of light.

In 1980, astronomers at Steward Observatory and Sacramento Peak said observations lead them to believe Pallas has its own satellite about 100 miles in diameter. Astronomers hope observations during the May occultation can confirm or correct this theory.

As Pallas passes in front of the star, 1 Vulpeculae's light will fade

and, depending on the viewer's location, ultimately wink out. Careful timing of those changes and the duration of the occultation, especially over a broad area, can add greatly to the knowledge of this asteroid.

In Texas, the cone or shadow of the occultation should extend roughly north to south from near Wichita Falls to Laredo and east to west from near Midland to the Houston area. Led by JSC's Paul Malley, the JSC Astronomy Club is seeking volunteers to participate in viewing the event.

Participants will station themselves at various points along the shadow area and will be instructed on how to take meaningful data useful to astronomers. An informational and organizational meeting for the occultation study is scheduled to be held at the Lunar and Planetary Institute beginning at 7:30 p.m. April 15. For more information, call Paul Malley at 488-6871.

STS-6

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at the Cape.

As for the mission itself, there was little that did not go precisely as planned. Weather in Florida, especially upper level winds, had been a concern the day before the April 4 launch, but precisely on schedule, *Challenger's* main engines and solid rocket boosters ignited and F-Troop was airborne. That name stems from the crews earlier designation as the "F" or sixth flight crew. Because all four of the crew members are over 40, they also advertised themselves as the Geritol Bunch, and during a television pass when they spoke with Vice President George Bush, they boasted of 111 years of aviation experience.

Once on orbit, it was hard to keep the crew from pressing on. After the successful deploy of the TDRS at 10:30 p.m. CST on flight day one, Musgrave was so pumped up he went on to complete a significant number of the checkouts on the spacesuits, two days early.

On Thursday, after about three hours of prebreathing to wash

nitrogen out of their blood, Musgrave and Peterson cracked the hatch and embarked on America's first space walk in nine years. "It was terrific," Lunny said, "right by the book. The crew seemed to be very comfortable, and it was most impressive to get that sense of scale with people out there against the backdrop of that huge cargo bay. An EVA on Shuttle is wide-ranging even when you stay in the cargo bay. The whole exercise points up the fact that even though we have not done an EVA in a long time, we know how to train for it and execute it, and do it well."

"We were elated," said Crew Systems Division Chief Walter Guy. "We thought we had all the bases covered the first time (prior to the attempted EVA on STS-5), but it goes to show that no matter how prepared you are, you can still be smitten by fate. We believe the hardware is and was always good. There were no anomalies whatsoever with the suits this time."

The EVA, apart from putting time on the new Shuttle suits, laid basic ground work for a variety of future tasks, including the planned repair

of the Solar Max satellite on STS-13. Commander Paul Weitz and Pilot Karol "Bo" Bobko also laid groundwork for that mission from another angle when they put *Challenger* through various maneuvers designed to simulate those which will be required for rendezvous and station keeping with Solar Max next year.

Program managers are now looking ahead to an even more demanding series of flights this year. Planning calls for a launch of STS-7 in early June, which would mean a record vehicle turnaround at KSC. STS-8 launch is scheduled for early August, but questions about the problem with the Inertial Upper Stage, which will have to be used to launch the second TDRS satellite on that mission, will have to be answered before that happens.

"We do have some tough decisions to make this summer," Abrahamson said. "Until we understand problems with the IUS, we are not going to commit an IUS with a TDRS. We are working on a backup plan for using a single TDRS to support the Spacelab flight, but no decision will be made there for another month or so."

A close save

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inclined 2.37 degrees to the equator. "We are studying what we can do to correct the orbit," Aller said. "We have 1,300 pounds of hydrazine aboard. We have a thruster system and we feel that with several hundred pounds of hydrazine we can significantly correct the orbit to near geosynchronous."

Later in the week, TDRS-A developed roll rate anomalies but was

still in a stable, sun oriented orbit.

At week's end, an IUS investigation board was named in an effort to understand what went wrong during the SRM-2 burn. The board will be chaired by Air Force Brig. Gen. Donald Henderson, Commander, Space and Missile Test Organization, Vandenberg AFB.

His NASA counterpart will be Marshall Deputy Director Thomas

J. Lee. Other board members are USAF Col. Lester McChristian Jr., USAF Col. William Foster, Robert Parks and Alton Jones. The board's first meeting was held at the USAF Space Division in Los Angeles April 7.

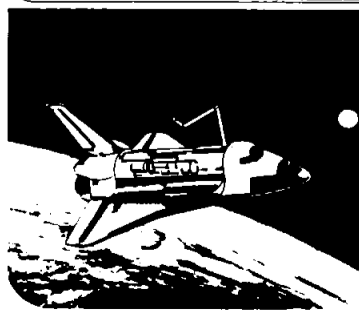
Program officials say they hope to begin maneuvering TDRS-A as close as possible to its intended position within the next few weeks.

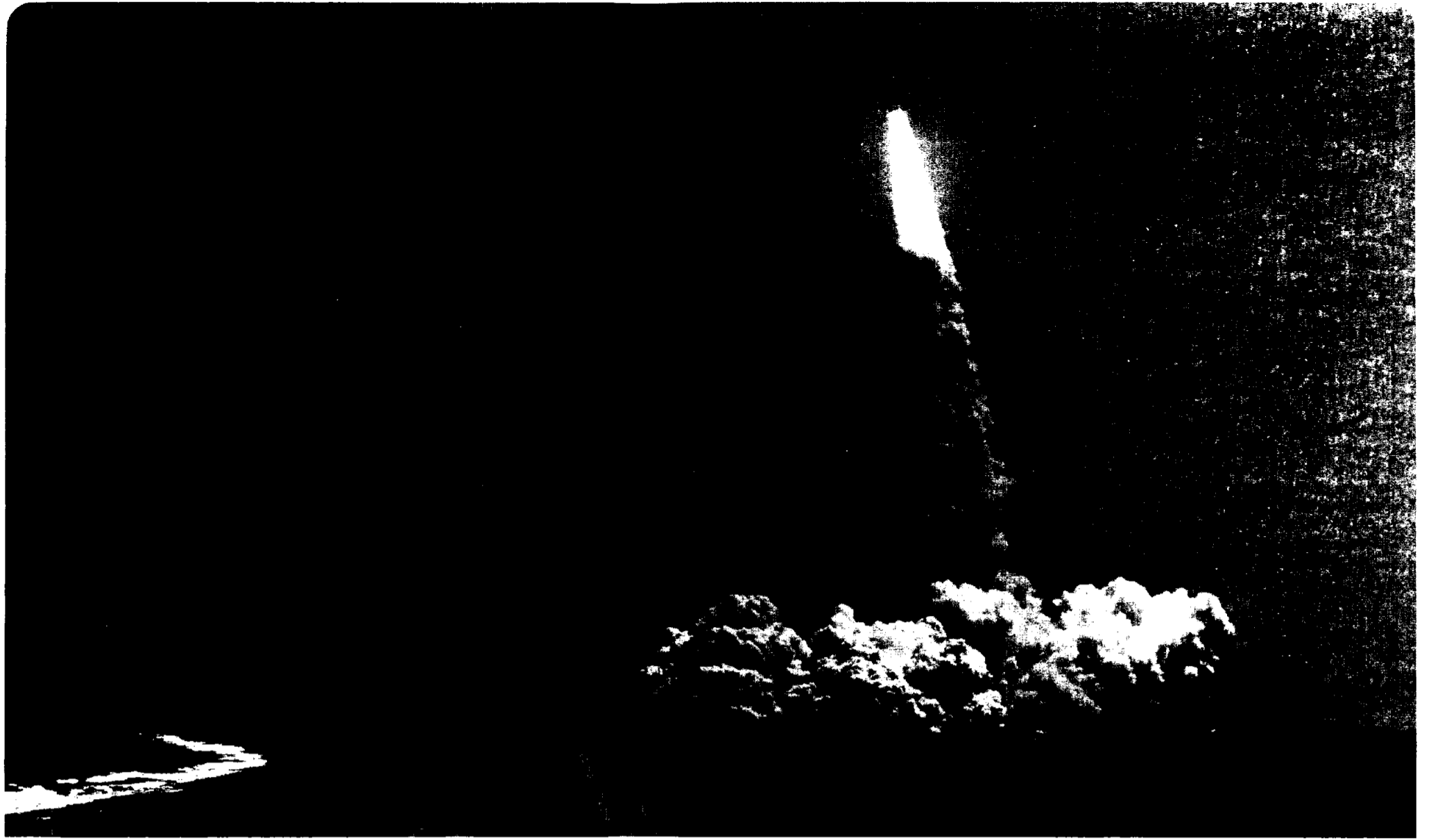
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Space News Roundup

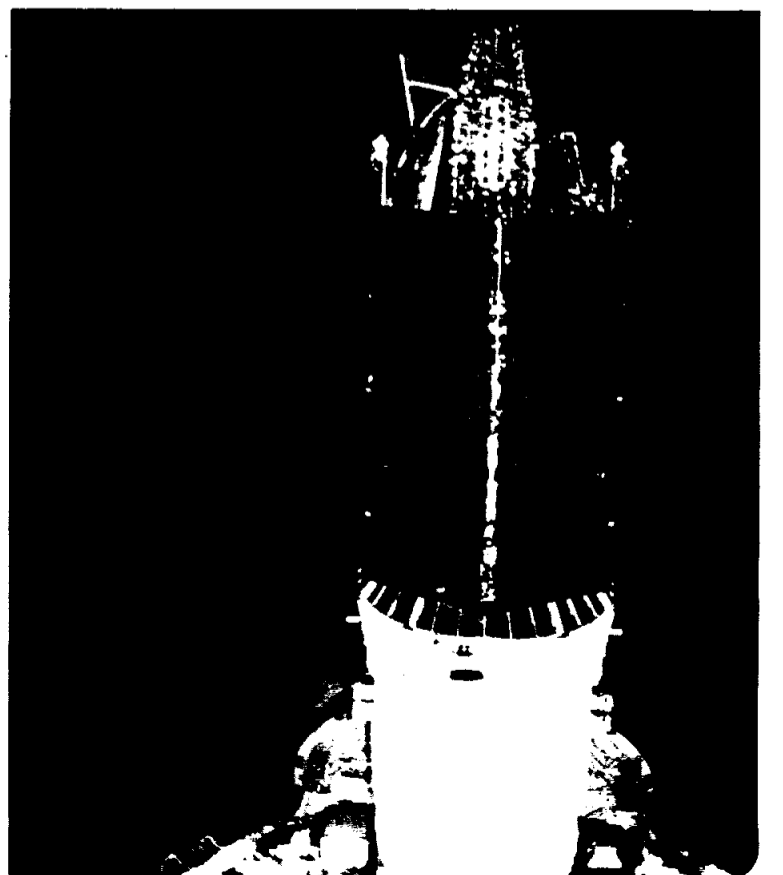
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Editor: Brian Welch





Photos rarely do justice to a Shuttle launch, but the view above comes close. This unusual view of the STS-6 ascent captures the power of a launch from a vantage point near the Atlantic Ocean in between Pad A and Pad B. At left, a lighthearted view of F-Troop, so named because the STS-6 crew was designated the "F" crew in the training cycle. Below left, Mother Earth looms in the background as Story Musgrave works near the Inertial Upper Stage cradle during the spectacular EVA. At bottom right, the TDRS/IUS combination is seen tilted toward deploy position during the evening of flight day one. A closeup of Musgrave shot by fellow spacewalker Don Peterson at right shows him working near the IUS cradle.



Reorganization underway here

JSC Director Gerald D. Griffin has announced an internal reorganization of the space center effective after the sixth Space Shuttle flight.

Griffin cited the center's evolution from primarily a Space Shuttle development role to space transportation system operations as reason for the change. "The record of accomplishment of the Johnson Space Center is a direct result of the high degree of competence, dedication and teamwork of our staff. I am very proud of our record and I am personally convinced that our future roles and missions will provide a challenge to us all," Griffin said in his official announcement of the reorganization.

The major organizational change involves the creation of three new elements: Space Operations, Research and Engineering, and Center Support. These will incorporate the existing functions at the Center, shifting those more directly involving operational space flight into one unit, research programs into a second, and the support functions such as administration and maintenance into a third.

Clifford E. Charlesworth will be acting Director of Space Operations, while continuing his present duties as Deputy Center Director. Reporting to Charlesworth will be George W. S. Abbey as Director of Flight Crew Operations, Eugene F. Kranz as Director of Mission Operations, and Jerry C. Bostick as Director of Mission Support.

Flight Crew Operations will include the Astronaut Office and NASA aircraft activity at Ellington Air Force Base. Mission Operations includes flight control teams, and Mission Support will encompass primarily the computer hardware and software support of the Mission Control Center and Space Shuttle simulators.

Aaron Cohen will serve as Director of Research and Engineering, a unit that will include many of the functions formerly included in the Engineering and Development organization and the Space and Life Sciences directorate. Reporting to Cohen will be William E. Rice, Assistant to the Director of Research and Engineering and acting Director of Space and Life Sciences, and Thomas L. Moser as acting Director of Engineering.

Center Support will be headed by William R. Kelly. Two functional areas under Kelly's overall super-

vision will remain essentially unchanged: Center Operations, Kenneth B. Gilbreath, director, and Administration, R. Wayne Young, director. Also reporting to Kelly will be Rob R. Tillett, Manager of the White Sands Test Facility.

Program offices also were realigned in the organizational change. The Space Shuttle Program Office is renamed the National Space Transportation Systems Program Office. Dr. Glynn S. Lunney will continue as program manager.

The Space Shuttle Orbiter Project Office is renamed the Space Shuttle Projects Office and will manage all JSC Shuttle hardware development. Arnold D. Aldrich will continue as manager.

Two staff offices are abolished. They are the Technical Planning Office and Program Operations Office. Joseph P. Loftus, currently Chief of the Technical Planning Office, will remain on the center director's staff as Assistant to the Director (Plans). Richard A. Colonna, Manager of the Program Operations Office, will be assigned as Deputy Manager, Space Shuttle Projects. Functions and personnel of these offices will be reassigned within the new organizational framework. All other staff offices remain unchanged in the management structure.

Commenting on the effects of the management reorganization, Griffin said, "I know that the organizational changes I am now implementing will in some instances be unsettling and require some adjustment in the way we do our work. I assure you, however, that I will do everything possible to minimize unnecessary disruption, and I ask each of you to join with me in making this transition a successful one."

As a result of the reorganization, the following new codes are being established: AM/Director of Space Operations, AE/Director of Research Engineering, AG/Director of Center Support, and DA/Mission Operations. The existing codes for the Systems, Training, and Operations Divisions will continue as presently assigned, except to substitute "D" as the first alpha character (in lieu of "C"). All other organizational codes remain unchanged, including the Assistant to Director (Plans) and the Assistant to Director (DOD Affairs) — AT and AF, respectively.

Gilruth Center News

Call x3594 for more information

Intercenter race — Once again JSC employees will have the chance to represent themselves in competition with other NASA centers. This race will be conducted April 11 through 30 with races at 5:15 p.m. There will also be a race beginning at 8 a.m. April 23. For more details, call the Rec Center at x3594.

Karate — This class meets Mondays and Wednesdays from 5:30 to 7 p.m. at a cost of \$20 per person.

Hotshot — This is a form of athletic competition based on a one-minute display of basketball skills. Despite its competitive aspects, Hotshot is a game anyone can play and enjoy, no matter his or her level of skills. The top four winners will compete at the JSC Picnic May 7. Entries are now being accepted for men and women with the tourney beginning at 1 p.m. April 16. Registration deadline is close of business April 13. The cost is \$1 per person and trophies will be awarded.

Softball tourney — Our tournament of champions will be open for men and women. Space is limited, first come, first served. The Tourney will be held April 15, 16 and 17 with an entry fee of \$65 per team.

Almost Anything Goes contest — Teams may now enter this competition with rules known only to the Rec Center staff. It will consist of four events, with teams of four females and four males. The cost is \$10 and both T-shirts and trophies will be awarded. Dates for the contest will be determined by the number of entries. Finals will be at the JSC Picnic on May 7. The deadline for entries is April 18.

Tennis reservations — Reservations are accepted for tennis courts only for those who have paid their yearly or quarterly fees. Come by the Rec Center office or call x3594 for more information.

Macrame — Learn the basic knots and how to combine them into a decorative piece. You will try various cords during the class, which begins April 13 and runs on Wednesdays from 7 to 9 p.m. The cost is \$28 per person for this six-week class.

Intermediate auto mechanics — Learn how to diagnose minor problems with your car before they become major expenses. The course features lectures on Wednesdays from 7:15 to 9:15 p.m. beginning April 20. Two Saturday labs will also be featured. The cost is \$45 per person.



This is Pilot Dan Brandenstein's unofficial patch design for STS-8, the third flight of the Orbiter Challenger, scheduled for launch this summer. Richard Truly, steely-eyed and bespectacled veteran of STS-2 and now Commander for STS-8, will lead four space rookies who are shown here only "slightly awed" by their participation in the Shuttle program's first night launch and landing. Joining Truly and Brandenstein on the flight, which will feature the deployment of the TDRS-B and INSAT spacecraft, will be Mission Specialists Dale Gardner, Guy Bluford and Bill Thornton.



This official patch for STS-7, now slated for launch during the first part of June, signifies the seventh Shuttle flight, while the symbology inscribed against the Sun denotes the flight of America's first woman astronaut, Dr. Sally K. Ride. STS-7 will also be the first Shuttle flight with five people aboard.

Cookin' in the Cafeteria

Week of April 18 - 22, 1983

Monday: French Onion Soup; Spare Rib w/Kraut, BBQ Sliced Beef, Parmesan Steak, Chili & Macaroni (Special); Ranch Style Beans, English Peas, Mustard Greens. Standard Daily Items: Roast Beef, Baked Ham, Chopped Sirloin, Fried Chicken, Fried Fish. Selection of Salads, Sandwiches and Pies.

Tuesday: Split Pea Soup; Meatballs & Spaghetti, Baked Ham w/Sauce, Liver & Onions, Corned Beef Hash (Special); Buttered Cabbage, Cream Style Corn, Whipped Potatoes.

Wednesday: Seafood Gumbo; Roast Port w/Dressing, Cheese Enchiladas, BBQ Link (Special); Spanish Rice, Pinto Beans, Turnip Greens.

Thursday: Beef & Barley Soup; Roast Beef w/Dressing, Fried Perch, Chopped Sirloin, Chicken Fried Steak (Special); Peas & Carrots, Buttered Squash, Whipped Potatoes.

Friday: Seafood Gumbo; Beef Stroganoff, Fried Shrimp, Baked Fish, Fried Chicken (Special); Okra & Tomatoes, Carrots in Cream Sauce, Buttered Broccoli.

About the Swap Shop...

Due to the press of news this issue, we regret the necessity for having to delete the Roundup Swap Shop. We apologize for any inconvenience this may cause our advertisers, and will print all ads now pending in the April 22 issue. If you would like to update your ad, or if you have already sold an item which was to be advertised, please call Editor Brian Welch at x5115. Many thanks for your understanding.