

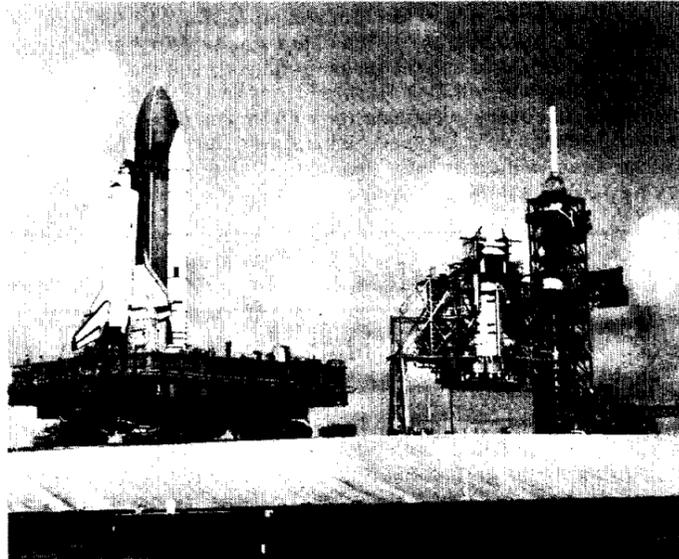
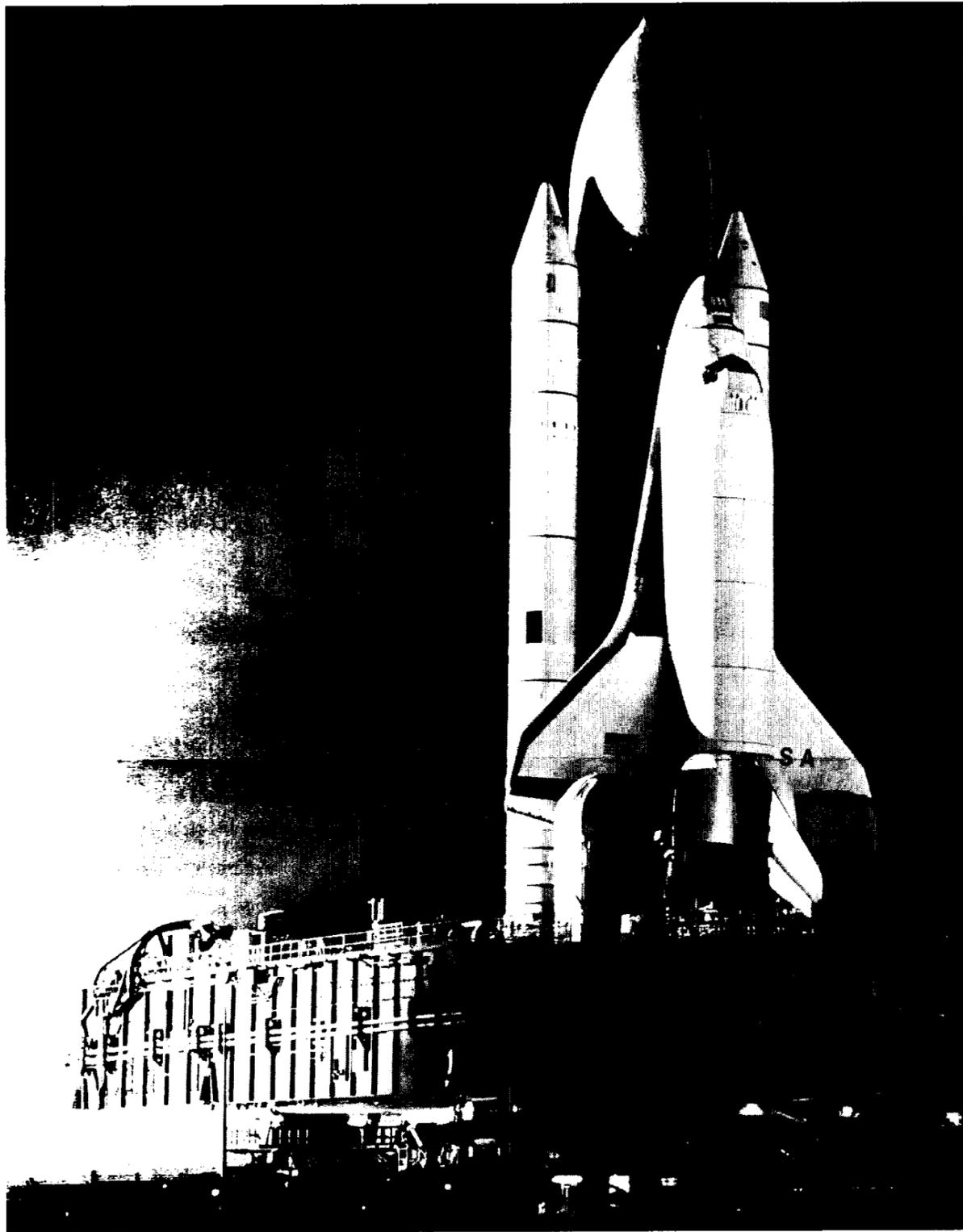
Space News Roundup

Vol. 21 No. 5

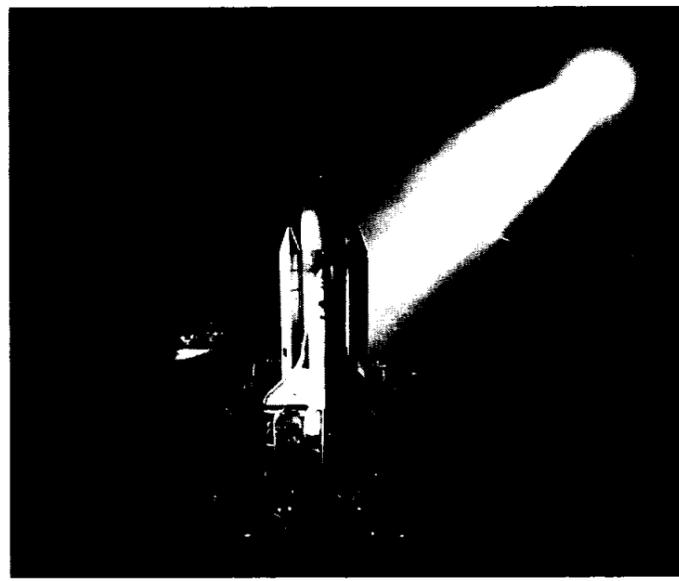
March 5, 1982

National Aeronautics and Space Administration

Go for pad--Go for launch--Go



These dramatic photographs illustrate the level of activity at the Kennedy Space Center in recent days, as *Columbia* was rolled out of the Vehicle Assembly Building and moved to launch pad 39A. At press time, hypergolic loading of the orbiter was underway, the last major event in the launch process until loading of the external tank begins five hours before liftoff. During a built-in 12 hour hold at T-8 hours, several experiments will be loaded into the cabin area. KSC expects a call to stations for launch personnel in less than two weeks, on March 18.



NASA names crews for next three flights

Astronaut crews for the fourth, fifth and sixth flights of the Space Shuttle were announced earlier this week by JSC.

Crewmen for STS-4 are Capt. Thomas K. Mattingly, USN, commander, and Henry W. Hartsfield, pilot. STS-4 is planned for launch in early July on a seven-day flight, and will be the last of four orbital flight test missions.

STS-5 crewmen are Vance D. Brand, commander, and Col. Robert F. Overmyer, USMC, pilot.

STS-5, scheduled for mid-November launch, will be the first to have mission specialist astronauts, who will be Dr. Joseph P. Allen and Dr. William B. Lenoir.

Columbia is currently scheduled to fly those missions and then be returned to California for post orbital flight test modifications. In the meantime, NASA plans to have Orbital Vehicle 099, *Challenger*, on line and ready to fly STS-6 by around January, 1983.

The crew for that mission is

Paul J. Weitz, commander, and Col. Karol J. Bobko, USAF, pilot. Donald H. Peterson and Dr. Story Musgrave will be the mission specialists during the scheduled two-day flight.

Besides being the first flight of a new orbiter, STS-6 will also be dedicated to deploying the first of two planned NASA Tracking and Data Relay Satellites. The TDRS system will eventually provide more comprehensive voice and data coverage between the

ground and orbiting Space Shuttles.

NASA also announced that backup crews will no longer be assigned to Space Shuttle flights. A pool of experienced Shuttle pilots now exists, the announcement said, "and a crewman could be replaced with minimal impact to crew training and scheduling." NASA has previously announced flight crews in advance, as during Project Apollo, but this will be the first time that backup crews have

been replaced with a pool of experienced flyers.

Mattingly, the STS-4 commander, was one of 19 astronauts selected by NASA in April 1966. After serving in the support crews for the Apollo 8 and Apollo 11 missions, he was named command module pilot for the Apollo 13 flight, but 72 hours before the scheduled launch, he was removed from flight status due to an exposure to German measles.

(Continued on page 2)

Student's insect experiment to fly on STS-3

The third flight of NASA's Space Shuttle, now scheduled for March 22, will have an exceptional meaning for a high school student from Rose Creek, Minn. He will have a scientific experiment flying on it.

The experiment, "Insects in Flight Motion Study," was devised by Todd E. Nelson, an 18-year-old senior from Southland Public

School, Adams, Minn., one of 10 finalists in the first national Space Shuttle Student Involvement Project.

The Shuttle Student Involvement Project for Secondary Schools is a joint venture of NASA and the National Science Teachers Association and is designed to stimulate the study of science and technology in the na-

tion's secondary schools.

The insects to be examined are the velvetbean caterpillar moth and the honeybee drone. The object of the experiment is to study these two species under uniform conditions of light, temperature and pressure; the variable being the absence of gravity in space.

The experiment will focus on the flight behavior in zero gravity

of two species of flying insects with differing ratios of body mass to wing area. Gravitational force is of primary importance for orientation and stable free flight of insects. The experiment will provide new aspects for research on responses of flying insects to changes in gravity, a subject which has been studied at NASA's Ames Research Center.

Ten insects of each species will be carried in separate canisters, which will be stored in a Shuttle locker. The crew of the Space Shuttle (Jack Lousma and Gordon Fullerton) will remove the canisters from the storage locker and attach them to the mid-deck wall, where the insects will be observed and filmed by a data ac-

(Continued on page 2)

Space News Briefs

MSFC scientists discover third fastest pulsar

Scientists at the Marshall Space Flight Center have discovered in the Large Magellanic Cloud the third fastest pulsar known to exist. The X-ray source is a collapsed sun — a neutron star — with a pulse rate of once every 69 thousandths of a second, according to Dr. Martin Weisskopf of Marshall's Space Science Laboratory. "There are only two faster than that, the Crab Pulsar which pulses once every 33 thousandths of a second, and the Binary Radio Pulsar which pulses once every 59 thousandths of a second," Weisskopf said. The discovery was made using data from NASA's HEAO-1 (High Energy Astronomical Observatory) and HEAO-2 satellites. The information from HEAO-2 showed the X-ray pulsations to be coming from a pulsar approximately 10 miles in diameter but with the same mass as Earth's sun, which is 430,000 miles in diameter. The pulsar also has a 16.6-day orbital period around a normal, or primary, star, much as a planet would revolve around its sun. Marshall scientists believe the two objects once existed as a binary star system, with one eventually collapsing into a neutron star. Normally such an event would destroy the entire star system, but for some reason the system adjusted and the pulsar began orbiting the remaining star. Dr. Weisskopf, along with Drs. Ronald Elsner and Dennis Leahy of Marshall, made the discovery in conjunction with Dr. Gerald Skinner of the University of Birmingham in England. Skinner said the next chance to study the pulsar again will come later this year when the European Space Agency's EXOSAT satellite is placed in orbit.

Bulletin Board

JSC Aero Club accepting applications

The JSC Aero Club is now accepting new membership applications for flying at club rates. Members may rent a Cessna 150 for \$20 an hour (wet) or a four-place Piper Archer II, with auto-pilot, air conditioning and full IFR panel for \$30 an hour (wet). Member dues are \$15 per month. The planes are based at Houston Gulf airport in League City. Two club members are certified flight instructors available for beginning lessons or advanced flight instruction. Membership is open to JSC employees and contractors. Experienced pilots are desired, but non-pilots may join and learn to fly. For more information or membership application forms, call J.D. Haptonstall at x5285, Dennis Morrison at x5281 or B. Mercantel at x2314.

LPI Seminar Series set for March and April

The Lunar and Planetary Institute, next door to JSC on NASA Road 1, will sponsor five seminars on various topics in March and April. The first seminar, "Topography and Tectonics of Venus," will be held at 3:30 p.m. March 12 in the Berkner Room at LPI, where all of the seminars will meet. George McGill of the University of Massachusetts will be the featured speaker. Other seminars during March and April are: "The Solar Nebula in Song and Story," John Wood of the Smithsonian Astrophysical Observatory, 3:30 p.m. March 26; "Chemical Weathering on Terrestrial-type Planets: Review of Significant Problems," James L. Gooding of JSC, 3:30 p.m. April 2; "Ancestral Rockies: Intraplate Deformation Related to Non-collisional Orogeny," Arthur Goldstein of the Bureau of Economic Geology at the University of Texas at Austin, 3:30 p.m. April 8; and "Reappraising the Concept of Precambrian Cratons and Mobile Belts," Martin Jackson of the Bureau of Economic Geology at the University of Texas at Austin, 3:30 p.m. April 23. For more information on the seminars, call the LPI at 486-2153.

Exchange Store offering tickets, coupons

The JSC Exchange Store, open from 10 a.m. to 2 p.m., is offering various coupons and tickets. The offerings, and their prices, are: Plitt Theatre tickets, \$2.25 each; General Cinema Tickets, \$2.40 each; Entertainment '82 coupon books, \$17.50 each; Gold C. Values coupon books, \$5 each; and 20 cent postage stamp books, \$4 each.

Dear Sir,

Mom said that since you've sent me so much material to help me with my studies and projects that I should send you something to help defray your costs. I agree. I've pinned half this week's allowance to this letter so it won't fall out and get lost when the envelope is opened. A dollar isn't much but it represents 1/2 of my income and I'll bet that's a much higher percentage than you get from the government.



Sincerely,
Andy Larson
301 N. Atlantic Ave.
Daytona Beach, Fla.
32118

Andy is not only smart, but perceptive as well. Although NASA appreciates the gesture, his dollar will be returned — along with a thank you letter and some agency publications — because his parents, as taxpayers, have already "paid" for materials sent him in the past. As a rule, NASA generally returns all such contributions, although large donations are sometimes turned over to the Comptroller at Headquarters.

Student's experiment

(Continued from page 1)

To broaden participation in the Shuttle Student Involvement Project, NASA solicited U.S. industrial firms and other groups to sponsor the development of the student experiments. Sponsors were asked to assign a company scientist to work with the student; fund the development of the experiment, including necessary hardware; provide travel funds to take the student to appropriate NASA installations during experiment development; and give the student assistance in analyzing post-flight data and preparing a final report.

The Avionics Division of Honeywell, Inc., of Minneapolis, agreed to sponsor Nelson's insect experiment. During the past six months Nelson has worked with Robert Moulton and Dr. Robert Peterson at Honeywell's headquarters to ready the experiment for flight.

Others who have assisted Nelson in this project are Robert D. Roberts, his teacher-advisor, and Dr. Bill Williams of the Biosystems Division at Ames. Assisting with Shuttle payload integration was Chris Perner and John Jackson of the Crew Integration Section at JSC.

All 10 of the 1980-81 student project winners and their teacher-advisors will be the guest of NASA for "hands on" experience during the Shuttle post-flight payload retrieval activities and preparations for the fourth flight at the Kennedy Space Center. The students and teachers will participate in a workshop to include presentations by the principal investigators of the space science experiment package flown aboard the third Shuttle mission.

Nelson will also be present at the launch of the third Shuttle mission from KSC in March.



Todd Nelson, center, zeros in on one of Jack Lousma's questions as the student experimenter and the STS-3 prime crew met last week. STS-3 Commander Lousma, left, and Pilot Gordon Fullerton, right, will carry Nelson's insect experiment into orbit during the upcoming flight in March.

Crew selections announced

(Continued from page 1)

He did get to fly, however, as command module pilot on Apollo 16 in April 1972. He has logged 265 hours and 51 minutes in space, with one hour and 13 minutes spent in extravehicular activity.

Hartsfield, the STS-4 pilot, became a NASA astronaut in September 1969. He was a member of the astronaut support crew for Apollo 16, and served in the same role for Skylab 2, 3 and 4. He retired from the U.S. Air Force in 1977 with more than 22 years of active duty, but remained with NASA as an astronaut in a civilian capacity. Both he and Mattingly have been the backup crew for STS-2 and STS-3.

Brand, the STS-5 commander, became a NASA astronaut in April 1966. He was in the support crews for Apollo 8 and Apollo 13, and was backup command module pilot for Apollo 15. He later served as backup commander for the Skylab 3 and 4 missions, and in 1975 got his first space flight during the Apollo-Soyuz Test Project as Apollo command module pilot. He has logged 217 hours and 28 minutes in space.

Overmyer, the pilot for STS-5, became a NASA astronaut in 1969 when the Air Force's Manned Orbiting Laboratory program was canceled. His first assignment with NASA was in engineering development duties with Skylab. He later served on the Apollo 17 and ASTP support crews, and in 1976 was named to participate in the Approach and Landing Tests of the Space Shuttle as prime T-38 chase pilot for Free Flights 1 and 3. Overmyer entered active duty with the Marine Corps in 1958 and now holds the rank of Colonel.

Allen, one of the mission specialists for STS-5, was a 1959 Fulbright Scholar, a research associate in the Nuclear Physics Laboratory at the University of Washington and a staff physicist at the Nuclear Structure Lab at Yale

University before becoming a NASA astronaut in 1967. He served as mission scientist while a member of the support crew for Apollo 15, and since 1978 has been part of the support crew for the Orbital Test Flight missions of the Space Shuttle. He was entry CAPCOM during STS-1, and has served as technical assistant to the Director of Flight Operations at JSC. Allen earned his Ph.D. in physics from Yale in 1965.

Lenoir, the second mission specialist on STS-5, was an instructor and assistant professor of electrical engineering at the Massachusetts Institute of Technology, where he earned his Ph.D. in 1965. He became a NASA astronaut in 1967 and was backup science pilot for Skylab 3 and 4. From 1974 to 1976, much of Lenoir's time was devoted to a NASA Headquarters study of the potential of solar power satellite systems. He is presently supporting the Shuttle program in the areas of payload deployment and retrieval.

Weitz, the commander for STS-6, will be the first man to fly *Challenger*. He became a NASA astronaut in 1966, and logged 672 hours and 49 minutes aboard the Skylab 2 mission as pilot. He retired from the U.S. Navy in 1976 with the rank of Captain, but remained with NASA as a civilian astronaut. Weitz has logged more than 6,200 hours of flying time, with more than 5,000 hours in jet aircraft.

Bobko, the pilot for STS-6, is an Air Force Colonel who was a member of the Air Force Academy's first graduating class. He became a NASA astronaut in 1969, and served in the very exacting 56-day simulation of a Skylab mission in the Skylab Medical Experiments Altitude Test. He was also a member of the astronaut support crew for ASTP, and served as both a CAPCOM and prime chase pilot

during the Approach and Landing Tests.

Peterson, a retired USAF colonel, is slated to serve as one of two mission specialists aboard STS-6. He became a NASA astronaut in 1969 and served in the support crew for Apollo 16. Peterson holds a master's degree in Nuclear Engineering from the Air Force Institute of Technology, and is also a graduate of West Point. He has logged over 4,490 hours of flying time, most of that in jet aircraft. He retired from the Air Force with the rank of colonel in the late 1970s, but continues with NASA in a civilian capacity.

Musgrave, another mission specialist on STS-6, became a NASA astronaut in 1967, and is both a pilot and a medical doctor. He received a doctorate in medicine from Columbia University in 1964, and a master of science in physiology and biophysics from the University of Kentucky in 1966. He served as backup science pilot for the first Skylab mission, and was a capsule communicator for the second and third Skylab missions. He was the mission specialist on the first and second Spacelab Mission Simulations.

Correction

The Feb. 23 issue of the **Round-up** incorrectly stated that studies for a Space Shuttle high orbit insertion technique began in 1979. Actually, the idea was first proposed around 1972 by Jack Funk of the Advanced Planning Branch, Mission Planning and Analysis Division. The technique was sufficiently understood at the time to give researchers an idea of where external tanks would reenter and how the technique would affect abort capabilities on ascent, according to Carl R. Huss, former chief of the Institutional Data Systems Division, now retired.

Interview

Deke Slayton

“Once you’re flying, then it’s easy.”

Deke Slayton rubbed his eyes and smiled the tired smile of a man who has endured countless interviews and expects to have several more inflicted on him before the clamor finally dies down.

“I sorta thought I’d seen the end of it,” he said with an expression somewhere between a grin and a grimace, “but there’s been a lot of interest lately.”

That is due, no doubt, to his retirement from NASA, an event which officially came to pass March 1. His last T-38 flight as a NASA astronaut/executive was on a beautiful clear day the week before. Since his impending retirement from the agency was announced several weeks ago, Slayton has carried on his schedule with no real changes, except for fitting in a sizeable number of interviews and getting 23 years worth of records, files and materials packed up in his office.

In the midst of boxes and piles of paper, we asked the last of the original seven Mercury astronauts still with NASA to sit down and answer some questions.

Roundup: Your retirement doesn’t mean that you won’t be involved with space-related activities. You’re getting into some consulting work, aren’t you?

Slayton: Right, yeah, every once in a while.

Roundup: What sort of contribution do you hope to make, either with Space Services, Inc. of Houston or Aerospace Corporation?

Slayton: It’s too early to tell, I think. Aerospace of course is strictly Air Force. They work for the Air Force almost one hundred percent. They’re kind of the Air Force’s space and missile consulting arm, I guess. Space Services, of course, is commercial.

Roundup: We hear that Space Services, which had an unsuccessful launch attempt of their Percheron liquid-fueled rocket at Matagorda Island last year, is now planning to go to a solid fuel rocket. Liquid oxygen is hard to deal with.

Slayton: Yeah, right. It is, especially when you start out trying to do your own design, from scratch. There’s enough existing hardware around that it’s a better thing to use what’s there, already proven. So that’s what they’re going to do. It’s the same kind of logic as back in the Mercury days: take a ballistic missile that’s already proven, and use it. That’s what these guys are trying to do, you know, take something that’s a known quantity, not go out and try to reinvent the wheel.

Roundup: When you see those kinds of activities, and from what you’ve seen in the Approach and Landing Tests and the Orbital Flight Tests, what kinds of commercial ventures might you expect in space in the future? For instance, there’s that group which hopes to buy a fifth orbiter. . .

Slayton: . . . yeah, right. . .

Roundup: . . . and apparently has some money gathered to do that. What do you think of the idea?

Slayton: Oh, I think it’s great. I don’t know whether they’re going to get one or not. But I don’t think they’re really interested in operating the orbiter specifically. They’re interested in beginning to work the payloads and the commercial applications. Hell, if they’ve got the money to go buy one and put it into the fleet, well, that’s good. That’s when the taxpayers don’t have to pay for one. In fact, that would be an attractive thing.



Snapshots from a fruitful career: Slayton poses in an Apollo-era spacesuit during preparations for the Apollo-Soyuz Test Project in 1975, upper left; and is shown boarding a fighter plane in 1961, upper right. At lower left, 18-year-old Army Air Force cadet Slayton grins in the sun at Victoria Field, Vernon, Texas, in 1942. At lower right, Slayton is interviewed by then nine-year-old Tina Aguilar for a children’s television show in San Antonio in 1979.

Roundup: At this stage, is operating an orbiter really something only NASA can do? Is it far-fetched to suggest that someone else could put one up, operate it in orbit and bring it back?

Slayton: No, it’s not really, although I don’t think anyone is going to go buy an orbiter and then go train their own flight crews and their own flight control and their own launch sites and all that. I think all they would do would be to take over the management of the payload, and still use the same people and equipment and the same everything to operate with.

Roundup: And just reimburse NASA for cost.

Slayton: Sure. I haven’t talked to them, but I presume that’s the way they’d do business. That would be the sensible thing to do.

Roundup: Well what if something like this does come to pass, and a commercial shuttle becomes a very successful venture. Is it outrageous to think that in the 1990s

some consortium might come along and build a second generation shuttle?

Slayton: Oh, it could be, but I would think again, more logically, that you would go with the current one, or approximately the same, on the existing production line, rather than go out and start all

‘ A shuttle comes in at about 290. . . it’s a high performance glider. ’

over with a new design. Again, you’ve a proven quantity, and the design is there, and inevitably, it’s got to be the cheapest way to go. You just go buy another and add on to something that’s already there. Sure, there wouldn’t be any reason for somebody not to do

that. This shuttle processing contract falls into that concept, where you would have a contractor, the way I understand it anyway, do the total operations as far as ground ops are concerned. Not flight ops, but ground ops.

Roundup: Which is no small task.

Slayton: No, that’s right. I think that’s the toughest thing. So that would be a commercial venture, assuming the contract is let. And then the step to have the same contractor responsible for flight operations is a pretty small step. Again, I would presume that the contractor would, in that mode, be depending on NASA to provide him the trained crews to do the job.

Roundup: Then there’s a group of airline pilots who have gotten together to try and learn how to fly orbiters. What do you think about that?

Slayton: I think they’re a little naive. In fact, a lot naive.

Roundup: Why?

Slayton: Well go over and see what happens in Bldg. 4 and Bldg. 5 for a couple of years. It takes a

whole lot more than just going through a correspondence course and ground school, that’s for sure. **Roundup:** Or sitting in a simulator for a few hours.

Slayton: Exactly. Well, they don’t even have a simulator. The implication of those guys is that they’re being sponsored or encouraged by NASA. I can’t find any indication of either one, of being encouraged or sponsored. It is exactly the opposite, as a matter of fact.

Roundup: It’s one thing to be a jet pilot, another to be a shuttle pilot.

Slayton: Yeah, well, it’s a big step from a commercial airline.

Roundup: Well what are the differences?

Slayton: It’s about an order of magnitude difference in performance, mostly. A DC-10 comes down at something like I think 130 or 140 knots. A shuttle comes in at about 290. Glidescope is about ten times steeper, and everything is happening about ten times faster. It’s a damn high performance glider. You don’t just jump out of any airliner into a high performance glider. You can jump from high performance airplanes into one, but there again, not until you’ve spend a whole lot of time in the jump.

Roundup: As manager for ALT and OFT, you must have a healthy respect for the complexity and performance envelope of the orbiters. Were there any characteristics of *Columbia* that struck you as significant, especially in atmospheric flight?

Slayton: Well, a general comment, I think on the part of everybody, was that subsonically, it was solid as a rock. A real responsible machine, very stable, flies very nicely. There are some areas in the supersonic regime that are marginal from a directional stability point of view, but then I don’t think that surprised anybody, that was predicted. There are some areas where it’s potentially a little hairy. If things aren’t going just right, if you take worst cases and have some systems failures on top of it, well, it could be difficult problem. But generally, it’s flown pretty much the way the Shuttle Training Aircraft flies and the simulator flies. It’s not that somebody suddenly got caught by a characteristic that was totally unexpected.

Roundup: Speaking of flying, are you going to get into midget airplane racing in the next few months?

Slayton: Well, I hope to. I don’t have a plane yet. I’m looking around at some.

Roundup: And the racing consists of flying fast and low, doesn’t it?

Slayton: The best place you can be is right down at the pylons, or lower, and the pylons are 50 feet high.

Roundup: And that’s at high speeds. . .

Slayton: Well, as fast as you can go, yeah (smiling).

Roundup: That makes good sense. One last question. Was the period between the Apollo Soyuz flight and the first launch of the Shuttle, in your opinion, a difficult time for NASA, and JSC especially, with that five-year hiatus in manned spaceflight?

Slayton: I don’t know that it was all that difficult. Everybody was working their butt off to get the shuttle up and running. It wasn’t like nobody was doing anything. I’ve always maintained that when you get ready to fly, the real work is over. Once you’re flying, then it’s easy.

Gilruth Center News

Call X3944 for more information

Basic auto mechanics — This class stresses the fundamentals of automobile repair. Class features three lectures on Thursdays, from 7:30 - 9:30 p.m. beginning March 25 and one Saturday morning laboratory. Cost is \$17 per person.

Tennis reservations — Please remember that use of Gilruth tennis courts is by reservation only. Cost is 75 cents per person for one and one-half hours, or \$10 per quarter, \$20 semi-annually, or \$30 yearly. Reservations can be made by advance payment of fees only.

March Space Shuttle Half & Quarter Marathon — Come sign up for our second annual Space Shuttle Marathon at the Rec Center. Starting time is 9 a.m. with check-in at 8 a.m. Trophies to the first male and female in both races, medals to the top three in each age group, and ribbons to all participants. T-shirts will go to the first 400 who sign up. Cost is \$5 per person or \$6 for late registration. Refreshments will be served. For more information call x3594.

Aerobic dancing — Dance away those extra inches with Jackie Sorensen's aerobic dancing. The 12-week session begins March 29 and 30 with classes on Monday and Wednesday from 9 - 10 a.m. and Tuesday and Thursday from 4:15 - 5:15 p.m. Cost is \$54.

Ballroom dance — Learn the fine art of ballroom dance. Class begins April 1 for eight weeks. Two classes will be offered on Thursday nights. Intermediate class runs from 7 - 8 p.m. while the introductory class runs from 8 - 9 p.m. Cost will be \$25 per person.

Basic drawing — Register now for this basic drawing class, which begins March 24 and lasts from 7:15 - 9:15 p.m. This four-week class will be held on Wednesday nights. Cost will be \$25 per person.

Creative stained glass — Learn the basics of stained glass art in this six-week course that begins March 23. Class meets from 7 - 9 p.m. and the cost is \$30. Class is limited to 15 people, so register early.

Arts & crafts sale — Do your shopping for Easter and Mothers Day at our crafts sale at the Gilruth Rec Center. All types of homemade and handmade items will be on sale. Time of the show is 9 a.m. - 4 p.m. March 28. Food will also be available and admission is free. A limited number of tables are still available. Call x3594 for more information.

Square dancing — By popular demand this class will again be offered starting April 1 on Thursday nights. Class will meet from 7:30 - 9 p.m. for 10 weeks. Cost of the course is \$25 per couple. Must know basic calls for this continuing class.

Defensive driving — Learn to drive safely and qualify for a 10 percent reduction in your auto insurance for the next three years. Class meets from 8 a.m. - 5 p.m. on April 24. Cost is \$18 per person and space is limited.

Ladies self-defense — Learn the basic skills of self-defense by signing up for this three week course. Class will begin March 23 on Tuesday and Thursday night from 8 - 9 p.m. Cost is \$25 per person.

Second annual Space Shuttle Men and Women's Softball Tournament — To be held at the Gilruth Recreation Center on March 19, 20 and 21. Teams will be accepted in an open category. Cost is \$65 per team. Limit is 24 men's and 12 women's teams. Trophies to winners in each category. Call x3594 for more details.

Outstanding secretaries named for January and February

Linda Allen, secretary to the flight directors and acting division secretary in the Systems Division of the Flight Operations Directorate, has been named the JSC Outstanding Secretary for January.

The Outstanding Secretary for February has also been named — Teresa Gomez, secretary to the Personnel Management Branch of the Personnel Office.

When Allen started in her job with the Flight Directors about 14 months ago, the final long haul toward STS-1 was underway, and she was instantly deluged with responsibilities and tasks. Her new job required her to be aware of STS-1 activities, keeping track of five flight directors who were often in as many locations, dealing with technical and public affairs personnel on all levels, and assisting in the preparation of many formal presentations.

Allen was also cited for organizing a division move for 186 personnel, and for developing various office procedures which have been well received by superiors.

"All of these tasks were accomplished from the beginning in a highly proficient and professional manner," wrote Donald R. Puddy, Systems Division Chief. "I have never been aware of any situation where an assignment was not ready on time, a meeting was inadequately coordinated, or a reminder not provided for an important meeting. And there was always an unhurried atmosphere in her work and a smile for all."

Gomez, the February Outstanding Secretary, became secretary to the Personnel Management Branch in 1979, just as the Civil Service Reform Act and associated regulatory changes were coming into effect. When JSC began to implement those changes, Gomez coordinated the production of manuals, instructions and clerical systems to expedite and monitor the many changes required by the Act. She assumed extra responsibilities, and her willingness to do so was one of the several reasons Branch Chief Gregory W. Hayes cited in making the awarded nomination.

Hayes said that Gomez was also instrumental in helping the office keep up with the many staffing forecasts and personnel actions during the changes imposed by a lowered personnel ceiling in FY 1980 and the one-for-two employment freeze of March, 1980. Gomez was responsible for developing and maintaining an accurate reporting system on which most all of the staffing changes were made.

"Throughout this period she developed, modified, and maintained a reporting system that was both accurate and timely and which allowed the Personnel Office to manage effectively within the constraints imposed upon it," Hayes said.

"She is an efficient and cheerful worker and has maintained that attitude even when dealing with difficult situations or personalities," Hayes said.

Both Gomez and Allen were presented with certificates and checks for \$150 in ceremonies with JSC Director Christopher C. Kraft Jr. in late February.

Cookin' in the Cafeteria

Week of March 8 - 12, 1982

Monday: French Onion Soup; Beef Chop Suey; Polish Sausage w/German Potato Salad; Breaded Veal Cutlet (Special) Okra & Tomatoes; Green Peas. Standard Daily Items: Roast Beef; Baked Ham; Fried Chicken; Fried Fish; Chopped Sirloin. Selection of Salads, Sandwiches and Pies.

Tuesday: Split Pea Soup; Shrimp Creole; Salisbury Steak; Fried Chicken (Special); Mixed Vegetables; Beets; Whipped Potatoes.

Wednesday: Seafood Gumbo; Fried Catfish w/Hush Puppies; Braised Beef Rib; BBQ Plate; Weiners & Beans; Shrimp Salad; Stuffed Bell Pepper (Special); Corn O'Brian; Rice; Italian Green Beans.

Thursday:

Chicken Noodle Soup; Beef Stroganoff; Turkey & Dressing; BBQ Smoked Link (Special); Lima Beans; Buttered Squash; Spanish Rice. **Friday:** Seafood Gumbo; Broiled Turbot; Liver w/Onions; Seafood Platter; Fried Shrimp; Meat Sauce & Spaghetti (Special); Green Beans; Buttered Broccoli; Whipped Potatoes.

Week of March 15 - 19, 1982

Monday: Beef & Barley Soup; Beef Chop Suey; Breaded Veal Cutlet w/Cream Gravy; Grilled Ham Steak; Weiners w/Baked Beans (Special); Whipped Potatoes; Brussels Sprouts; Buttered Rice. Standard Daily Items: Roast Beef; Baked Ham; Fried Chicken; Fried Fish; Chopped Sirloin. Selection of Salads, Sandwiches and Pies.

Tuesday: Celery Soup; Fried Shrimp; Turkey a la King; Pork Chop w/Applesauce; Chinese Pepper Steak (Special); Au Gratin Potatoes; Breaded Squash; Buttered Spinach.

Wednesday: Seafood Gumbo; Fried Catfish w/Hush Puppies; Braised Beef Ribs; Mexican Dinner (Special); Spanish Rice; Ranch Beans; Buttered Peas.

Thursday: Green Split Pea Soup; Corned Beef w/Cabbage & New Potatoes; Chicken & Dumplings; Tamales w/Chili; Hamburger Steak w/Onion Gravy (Special); Navy Beans; Buttered Cabbage; Green Beans.

Friday: Seafood Gumbo; Deviled Crabs; Broiled Halibut; Liver & Onions; BBQ Link (Special); Buttered Corn; Green Beans; New Potatoes.

Roundup Swap Shop

Ads must be under 20 words total per person, double spaced, and typed or printed. Deadline for submitting or cancelling ads is 5 p.m. the first Wednesday after publication. Send ads to AP3 Roundup, or deliver them to the Newsroom, Building 2 annex. No phone-in ads will be taken. Swap Shop is open to JSC federal and on-site contractor employees for non-commercial personal ads.

Property & Rentals

For lease: Sun Valley 3-1 1/2-2 house, off Gulf Fwy. near Alameda Mall, \$525/mo. plus deposit. Call Jim McCoy, x2956.

For sale: El Cary Estates, by owner, spacious 3-1 1/2 custom built home, large wooded lot, owner will help finance, \$16,000 equity. Call 538-2165.

Four lots, Peach Creek Forest, owner will finance. Call 869-9888 or 682-6546 after 7 p.m.

For sale: Galveston By-The-Sea condo, like new, fully furnished, \$10,000 equity and assume. Call 488-3377 after 5 p.m.

Acres for sale, Centerville area. Woods, cabin, some with utilities, deer. Call 921-7212.

For sale: Baywind II condo, 2-1 1/2-2, all appliances, W/D, upstairs, with balcony. Assume 9 5/8% loan, \$41,900. Call 488-5969 evenings, after March 14.

Cars & Trucks

1968 Cadillac, reliable transport, \$900 or best offer. Call 486-2172 or 333-3687 after 5 p.m.

1976 Buick Sport Coupe, solid, reliable transport, PS, PB Auto, AM/FM, vinyl interior, one owner, \$1,800. Call 334-2494.

1967 International 1/2 ton pickup, good condition, runs well, best offer. Call 996-1105 after 5 p.m.

1973 Plymouth, 2 dr., \$1,100. Call Betty, x3328.

1978 Chevy 4WD pickup, completely loaded, super clean inside and out, excellent mechanical condition, \$6,000. Call Stuckey, x4202 or 481-2784.

1981 GMC Sierra, SWB, stepside 6, AC, PS, PB, AT, AM/FM/tape, RWL tires, chrome spokes, 5,000 miles, \$6,700. Call 487-7469.

1974 Mercury Capri, 2.8 cc, radio, AC, new tires, \$1,000. Call Troeger, x4193 or 748-6605.

1973 Dodge Maxivan, standard trans., AC, PS, PB, AM/FM/CB, 360 V8, 69K miles, \$2,500. Call 482-7156.

1973 Capri, V-6, auto, AC, AM radio, sun roof, good condition. Call 334-3498 after 6 p.m.

1981 Chevette, 2 dr. hatchback, excellent condition, 4 spd., AC, AM/FM, low mileage, \$5,200. Call Ligrani, x2831 or 334-3062.

1972 Datsun 510 station wagon, good body, engine, tires, \$1,200. Call 534-4227.

1976 Lincoln Towncar, fully loaded, moonroof, 14 mpg, brown w/beige interior, excellent condition, \$500 below book value, \$3,700. Call Morrison, x5281 or 334-5757.



People Helping People
The United Way

Cycles

1979 Suzuki TS 100, good looking, runs great, current tag, \$450. Call 480-3356 after 5 p.m.

1978 Yamaha 650, excellent condition, fairing, helmet, saddlebags, low mileage, \$1,295. Call John, x5553 or 944-4997.

1977 Kawasaki KZ1000, low mileage, full-airing, excellent condition, best offer. Call 474-5496.

1977 Honda 750A Vetter Windjammer, custom seat and rack, new chain, tires, tubes and battery. Honda maintained and in excellent condition, \$2,000 or best offer. Call Mike Drews, x4326 or 480-1653.

1975 Suzuki 500, fairing, sissy bar, crash bars, rack, new tires, 4,600 miles, excellent condition, two helmets, \$800. Call 488-5881.

1981 Yamaha Virago V-twin, 950 miles, new cost \$3,400, will sell for \$2,700. Call 487-7469 after 5 p.m.

1980 Kawasaki KZ-550, excellent condition, \$1,700 or trade for late model VW Beetle. Call 482-7873. 26 inch Baja 10-speed heavy duty bike, used 3 months, excellent condition, \$90. Call L. W. Croom, 944-5624.

Boats & Planes

Flyers wanted—fly Cessna 150 for \$20/hr., wet, or 4-seat Piper Archer II (IFR) for \$30/hr., wet. Call J. D. Haptonstall, x5285 or D. R. Morrison, x5281.

1/3 interest—1976 Piper Archer II, IFR, auto-pilot, air conditioned, leasing tax advantages, \$3,500. Call Morrison, x5281 or 334-5757.

FAA Pilot ground school, beginning in March, \$10. Instructors, planes at low rates. Call Mark, 483-4436 or 480-2634.

Dolphin Sr. Sailboat, \$400; trailer, \$25. Call Joe, x5437 or 333-2236 after 5 p.m.

Video & Audio

17" solid-state color TV, \$125. Call 488-5564.

Pioneer PL-512 turntable, pickering XSU-3000 cartridge, perfect condition, \$60. Call 488-3966.

Photography

17.5" 14.5 optics from Coulter Optical. Ordered in July '81, will probably be delivered in July-August '82. Call Phil at 488-5660, x308 or 334-5892.

Computers

Ohio Scientific C3-OEM computer. Two eight-inch disc drives, Fortran, Cobol, Basis, Magic Wand word processor, Hazeltine terminal, all for \$4,000, firm. Call 488-5514.

Household Articles

Mahogany drop leaf, antique, excellent condition, \$375; 50 National Geographics, \$25 for all. Call 488-5564.

Yellow rattan double dresser w/mirror, nightstand, headboard w/frame, \$500. Call 488-5051.

Contents of household for sale: furniture, rocking chair, stereo, rattan chairs, etc. Call Janet, 333-1790.

Giveaway: 1964 Frigidaire built-in oven, counter top range, powered vent, everything works. Call Kennedy, x3969 or 649-1236.

Mini-blinds, matchstick blinds, shades, curtains, draperies, Kirsch rods, etc. All in good condition, sizes vary. Call 332-8328 after 5 p.m.

GE refrigerator, frost free, 11 cu. ft., bottom freezer compartment, olive green, 18 years old, excellent condition, \$90. Call 474-5258 after 5 p.m.

Musical Instruments

Ventura Les Paul electric guitar, excellent condition, \$200 with case. Call Galen, x3576 or 332-8837.

Upright piano, good condition, \$500. Call 482-3989.

Fischer baby grand piano, almost an antique, good condition, \$1,950. Call Bowland, x3881 or 488-5580.

Pets

Wanted: home for one year old Golden Retriever/German Shepherd, house broken, gentle and loves outdoors. Call 488-7636.

Two year old female German short hair, papers, very good with children, needs a good home. Call 738-7133 after 6 p.m.

Only one left! Adorable blond cocker spaniel, 8 weeks old, shots, wormed, female, \$75. Call Mullis, x3762 or 339-2056 after 5 p.m.

Wanted

Softball glove for left-handed person, need right-hand glove. Call Sandra, x3995 or 333-4379.

Used or new upright piano. Call Steve, 471-0262 after 6 p.m.

Professional to share 4 BR furnished home in Countryside/League City, \$250/mo. plus deposit. Call 332-1293 after 5 p.m.

Non-smoker to share 2 BR, 2 bath apartment, Nassau Bay. Call Ron, 486-2172 or 333-3687 after 5 p.m.

Minolta Rokkor-x MC 35 or 28 mm wide angle lens. Call Konradi, x2956 or 334-2180 evenings.

Looking for AKC registered female silver toy poodle for breeding and pick of litter. Call 333-2717 evenings.

Found

Small gold piece from larger piece of jewelry, Bldg. 30 parking lot. Call Al, x2108.

Miscellaneous

Eight-foot insulated camper shell, cabinet storage, electric AC, \$200. Call x5271 or 332-4750 after 6 p.m.

Fly International Pan Am 2 for 1 coupons to May 31, \$75 or 2 for \$100. Call Doris Wood, 333-2373 evenings.

Boy's 16" bike, good condition, \$15; boy's 12" bike, \$8. Call 488-5051.

Sonata AM/FM radio with M/S, L/D, out of '79 Fiat Spider, \$50. Call 480-3356 after 5 p.m.

Simpson Model 390 AC volt-amp-wattmeter, new, \$50; trailer hitch with 7/8 ball, fits most cars and sw, like new, \$15; 4-burner Tappan table top stove, \$20. Call x4643 or 921-7212.

S & W .38 spc., stainless, mod. 64, \$200. Call Bob, x3463.

Camper top for LWB pickup, aluminum with wood panel interior, jalousie windows, approx. 18" higher than cab, \$125. Call Bryan Clyatt, 944-3725 after 4 p.m.

Surfboard, \$150; trolling motor, \$100; 6 1/2 hp Br. Seagull outboard, \$300; moped, \$150; ping pong table, \$50; Ford saddle TKS, \$100; glass stove door, \$80. Call Steve, x2541.

Boat battery box, \$2; utility trailer for rent, \$5/day. Call T. Ward, 488-5445.

It's delicious and unique. Homemade fudge with pecans, for special order call 486-0773.

Ward's 9 x 12 deluxe family tent, used once, \$75; Ward's sleeping bag, like new, \$8; blue early American sofa, good shape, \$50, will deliver locally. Call B. Pearson, x3161 or 488-3819.

Sunbeam 3-5 hp electric lawnmower, good condition, used one year, \$75. Call 334-3498 after 6 p.m.

Pan-Am International 2 for 1 coupons until May 31, trade for 19" TV or anything of equal value. Call 488-5564.