

Space News Roundup

Latest astronaut candidates include four JSC employees

Four JSC employees are among the group of 15 new astronaut candidates NASA has selected for the Space Shuttle program.

Seven are pilot (PLT) astronaut candidates and eight are mission specialist (MS) candidates. They will report to JSC Aug. 17 to begin a year-long program of training and evaluation. Successful candidates will begin training assignments leading to selection for Space Shuttle flight crews.

The astronaut candidates include five civilians and 10 military officers. Two of the mission specialist candidates are women. Of the five civilians selected, four are current employees of the Johnson Space Center and one is employed by NASA's Marshall Space Flight Center.

NASA received 1,962 applications from which 117 persons were interviewed and given medical examinations at JSC.

The 15 candidates for the Astronaut Class of 1987 are:

Thomas D. Akers (MS)—A Captain in the U.S. Air Force, Akers is Executive Officer for Research, Development and Acquisition with Armament Division Headquarters at Elgin Air Force Base, Florida. He was born May 20, 1951 in St. Louis and holds a bachelor of science and a master's in applied mathematics from the University of Missouri at Rolla.

Andrew M. Allen (PLT)—A Captain in the U.S. Marine Corps, Allen is a test pilot under instruction at the U.S. Naval Test Pilot School in Patuxent River, Maryland. He was born August 4, 1955 in Philadelphia, and has earned a bachelor of science in mechanical engineering from Villanova University.

Kenneth D. Bowersox (PLT)—A Lieutenant in the U.S. Navy, Bowersox is currently a Project Pilot at the Naval Weapons Center in China Lake, California. He received a bachelor of science in aerospace engineering from the U.S. Naval Academy and a master's in mechanical engineering from Columbia University. Bowersox was born November 14, 1956 in Portsmouth, Virginia.

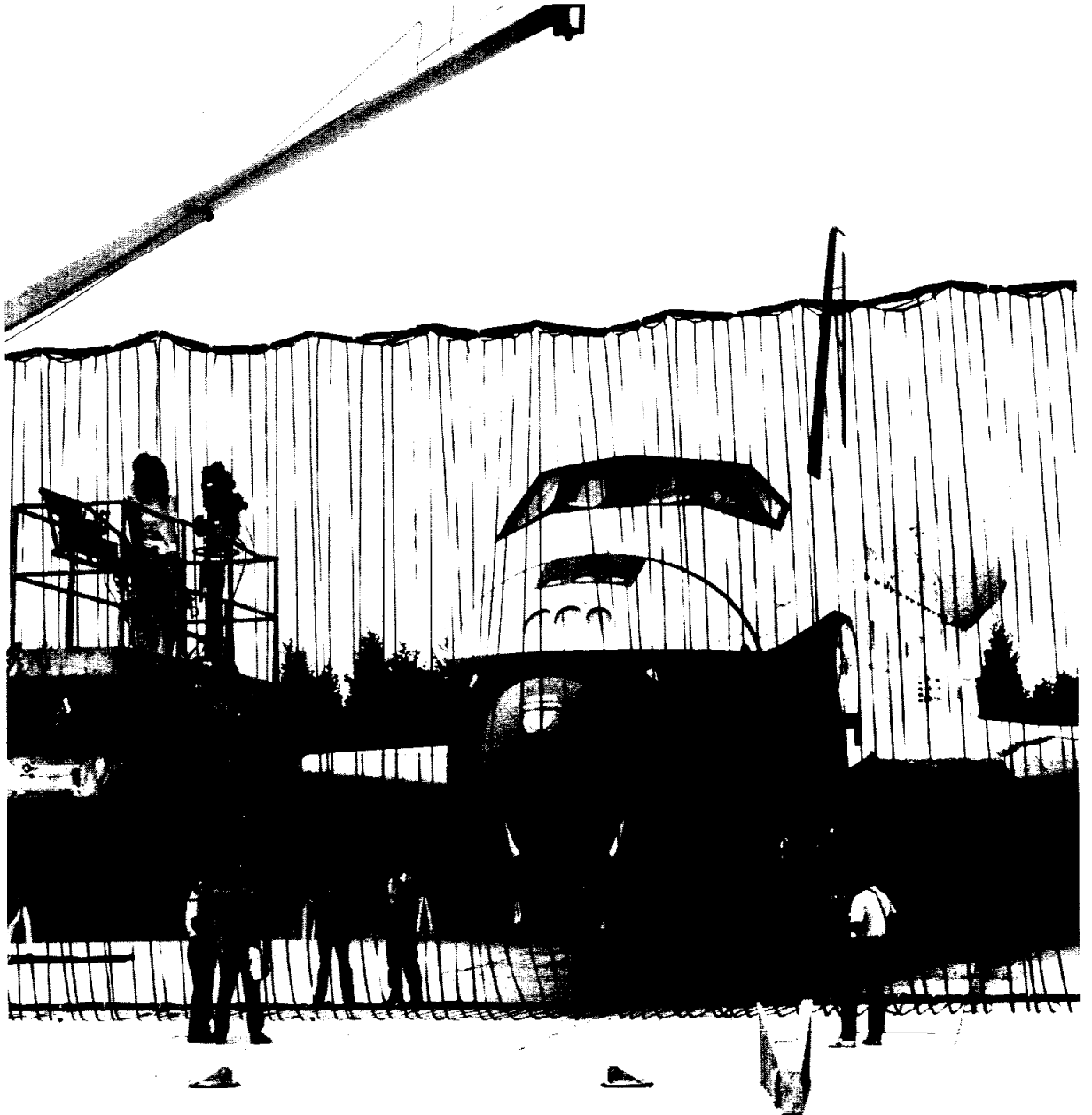
Curtis L. Brown, Jr. (PLT)—A Captain in the U.S. Air Force, Brown is the Director of A-10 Tests, 3247th Test Squadron, at Elgin Air Force Base. He holds a bachelor of science in electrical engineering from the U.S. Air Force Academy and was born March 11, 1956 in Elizabethtown, North Carolina.

Kevin P. Chilton (PLT)—Chilton, a Major in the U.S. Air Force, is also with the 3247th Test Squadron at Elgin AFB working as an operations officer. He holds a bachelor of science in engineering science from the U.S. Air Force Academy and a master's in engineering mechanics from Columbia University. Chilton was born November 3, 1954 in Los Angeles.

Jan D. Dozier (MS)—Dozier is an aerospace engineer for the Structures Engineering Branch at Marshall Space Flight Center. She has earned both a master's and a doctorate in mechanical engineering from the University of Alabama. She also holds two bachelor's degrees, one in the same field, from Auburn University, and one in biology, from Georgia Tech. Dozier was born November 1, 1953 at Patrick Air Force Base, Florida.

C. Michael Foale (MS)—Foale is a Payload Officer in the Operations

Continued on page 2



The Orbiter Enterprise was called back into service last week at Dulles International Airport outside of Washington, D.C. for validation tests of a proposed Shuttle landing aid. Enterprise, on loan from the Air and Space Museum, was slowly pulled through an arresting net as part of the tests. An arresting net and a drag chute are two concepts under study as possible emergency landing aids for the Shuttle.

Children of JSC employees earn college scholarships

The son of a JSC employee will receive one of two 1987 NASA College Scholarships, and the children of three other employees will receive JSC Employee Activities Association scholarships.



Brandon Brown

Brandon R. Brown, son of Robert H. Brown, chief of the Mission Planning Analysis Division's Technology Development and Applications Branch, was chosen from 91 applicants to receive the NASA College Scholarship.

Preston "Pepper" Wilson, son of Helen Wilson in the Propulsion and Power Division's Systems Branch, Linda Marie Low, daughter of Wayne S. Low of the NASA Contract Administration Office at Downey, Calif., and Lance Allen Bertrand, son of Olan Bertrand of Flight Crew Operations, were chosen from 40 applicants to receive the EAA scholarship.

Jennifer J. Muhonen, daughter of Goddard employee Daniel P. Muhonen, also will receive a NASA College Scholarship.

The NASA College Scholarship Fund Inc. was set up in 1982 as the result of a gift from author James

Michener. The corporation has offered scholarships since then to qualified dependents of NASA employees and former employees agencywide. This year's recipients will receive \$1,500 each. The scholarships may be renewed each year for a maximum grant of \$6,000 over six calendar years.



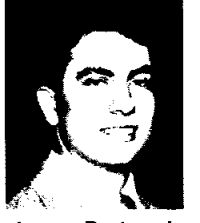
Preston Wilson

The EAA scholarships have been offered since 1967 to dependents of JSC employees at the center, White Sands Test Facility, or the

Downey or KSC Resident Offices. This year's recipients will receive \$4,000 (up to \$1,000 a year) for study at any college or university.

Brown graduated fourth in his class at Clear Creek High School, League City, in May. He plans to earn degrees in physics and/or computer science and hopes to attend either Rice University or Caltech. Brown is a National Merit Scholarship finalist, and received the Rensselaer Medal, given to outstanding junior math and science students. He attended the National High School Institute at Northwestern University, studying CAD/CAM Robotics, Theory of

Relativity, Electronic Circuits and Particle Physics. His extracurricular activities included basketball, senior play, Latin Club president, science fairs, J.E.T.S. vice president, peer counseling, tutoring, poetry writing and a Get Away Special Space Shuttle project.



Lance Bertrand

Wilson is a freshman at the University of Texas, Austin, majoring in mechanical engineering in the Engineering Honors Program. *(Continued on page 2)*

Students to name OV-105

Orbiter Vehicle 105, the replacement for the *Challenger*, will be named by the nation's schoolchildren under a program recently announced by NASA.

Under the program, students of a classroom or school will undertake an educational research project designed to arrive at a name for OV-105. NASA will have final approval of the name.

The Agency said it has considered retiring the name *Challenger* in honor of the 51-L crew.

The program is designed to permit the involvement of a school system or an entire community. It will be open to all 50 states, U.S. territories, Department of State overseas schools and the Bureau of Indian Affairs, according to Administrator James C. Fletcher.

"Through the program, students, teachers and parents will learn more about the technology that affects all of our lives," Fletcher said. "It is fitting that students and teachers who shared in the loss of the Space Shuttle *Challenger*, share in the creation of its replacement."

The NASA Headquarters Educational Affairs Division will be responsible for the formation and management of the program. The *(Continued on page 2)*

Safety reporting system established

NASA has established a voluntary, confidential safety reporting system for its 100,000 employees and contractor personnel to alert management of safety concerns.

The new reporting system supplements existing safety reporting procedures and will initially focus on safety concerns associated with the Space Transportation System. The new system is being established as a result of the *Challenger* accident.

The NASA Safety Reporting System (NSRS) will encourage employees to submit confidential reports to Battelle Memorial Institute's Columbus Division in Columbus, Ohio. Battelle Institute is under contract to NASA to develop and

administer the NSRS for the Safety Division at NASA Headquarters.

Use of the NSRS report form will provide anonymity to the maximum extent possible within the law for individuals disclosing their safety concerns, officials said. The form will contain a section at the top for individuals to include their names, addresses and telephone numbers.

Upon receipt of the report form, the Battelle NSRS team will remove this top section unless team members feel additional data would be useful. If so, the team will contact the sender for the needed information and then remove, stamp and return the top section to the sender as proof that a report has been successfully filed. No record will be kept of the individual's identity.

After a report is filed, Battelle and NASA safety specialists will determine the nature of the concern and whether it constitutes a critical need requiring immediate action.

The Battelle team also will summarize all reports, store the inputs in a computerized data management system and forward summaries to Headquarters for further analyses or action.

Employees also are reminded that another outlet for safety concerns is the NASA Space Flight Safety Panel chaired by Astronaut Bryan D. O'Connor. There are two contacts from the panel at JSC: O'Connor, who can be reached at x31028, and Flight Director Larry Bourgeois, who can be reached at x35437.

Bulletin Board

JSC a stop for Great American Race

The Clear Lake area has been designated as a priority stop for the fifth annual Great American Race, recognized as the world's greatest road rally for antique automobiles. The race will begin in Anaheim, Calif., on June 30, and end 11 days, 10 states and 3,660 miles later in Orlando, Florida. An estimated 120 pre-1937 vehicles will begin arriving at JSC's Rocket Park about 4 p.m. July 5. The racers will arrive and depart at one-minute intervals, with the last vehicle departing about 6:15 p.m. About 50 vehicles will accumulate at the parking area before departing. Visitors will be allowed onto the parking lot to talk with drivers and navigators and see the machines close-up. ContraBand, a local swing band that includes JSC employees, will provide music. JSC's visiting hours will be extended through 6 p.m. to accommodate the race. The Clear Lake Area Convention and Visitors Bureau is official host.

Astros tickets available

The Employee Activities Association is offering a \$2.50 discount on field level seats at the Astrodome for Houston Astros games July 10 against the New York Mets and Aug. 15 against the Atlanta Braves. The tickets, for seats in Section 232, go on sale June 24 at the Bldg. 11 Exchange Store. There is a limit of 8 tickets per purchase, and a NASA badge is required.

NMA meeting is June 24

The next dinner meeting of the JSC Chapter of the National Management Association will begin at 5 p.m. June 24 at the Gilruth Recreation Center. Walter A. Beck, National Director of the NMA, will be the featured speaker. The meeting also will include the installation of new officers. For more information, call x38120.

FEPC lab to open for Spaceweek

Boeing's Flight Equipment Processing (FEPC) laboratory will be open to the public for scheduled tours as part of the Spaceweek observance in July. The laboratory, located at 1045 Gemini Ave., will be open Thursday and Friday, July 16 and 17, from 2 to 3 p.m. and Monday through Friday, July 20 to 24, from 2 to 3 p.m. Tours will be conducted only by reservation. To make reservations, call Julia Sorrels, Boeing Public Relations, at 280-2023.

Credit Union membership drive underway

The JSC Federal Credit Union, as part of its annual membership drive, will have officials on hand at information booths in the Bldg. 3 and Bldg. 11 cafeterias June 23 and 24. The Credit Union table will be in the Bldg. 3 Cafeteria from 11 a.m. to 1 p.m. June 23 and in the Bldg. 11 Cafeteria from 11 a.m. to 1 p.m. June 24. Officials will be available to answer employees' questions on membership and services. For more information, call Molly Springer at 488-7070.

Pascal/C/Modula-2 Users Group forms

Employees who use Turbo-Pascal, Turbo-C or Modula-2 software are invited to attend the Pascal/C/Modula-2 Users Group organizational meeting at 11:30 a.m. June 26 in Bldg. 13, Room 147. One goal of the organization is to promote ready access to information on algorithms, codes and other problems users encounter. For more information, call Keith Brown at x38952.

Gilruth Center News

Call x30304 for more information

Early morning exercise—Stretch and tone your muscles every Monday and Wednesday from 6:45 to 7:45 a.m. Class begins June 29, and cost is \$20.

Moonswalk Softball Tournament—Men's Open C softball tournament will be July 18 and 19. Deadline for entries is July 15. Cost is \$95.

Weight safety—This is a required course for those employees wishing to use the Rec Center weight room. The class will be held July 9 from 8 to 9:30 p.m.

Defensive driving—Learn to drive safely and qualify for a 10% reduction in auto insurance rates. All-day Saturday class meets July 20.

New in the Library

AIAA/ASIS/DODCI Second Aerospace Computer Security Conference, 1986, Collection of Papers, by AIAA.

Aircraft Gear and Bearing Tribological Systems, by NATO.

Cryogenic Optical Systems and Instruments, by R.K. Melugin.

Delta Launch Vehicle Accident Investigation, by U.S. Congress.

Digital Optical Circuit Technology, by NATO.

Healthy Companies: A Human Resources Approach, by R.H. Rosen.

Innovations in Materials Processing, by G. Bruggeman.

Investigation of the Challenger Accident: Report of the Committee, by USGPO.

Manned Mars Missions: Working Group Papers, Vols. 1 and 2, by NASA.

NASA's Quality Assurance Program, by U.S. Congress.

Pioneering Space: Living on the Next Frontier, by J.E. Oberg.

Research and Development: Key Issues for Management, by J.K. Brown.

Space Safety and Rescue, 1982-83, by G.W. Heath.

Space Shuttle: A Triumph in Manufacturing, by R.L. Vaughn.

Statics and Applied Strength of Materials, by R.F. Nathery.

1986 IEEE Global Telecommunications Conference, Vols. 1-3, by IEEE.

1987 NASA Authorization, by U.S. Congress. (Reference use)

1988 Budget of the United States Government, by USGPO. (Reference use)

20th Aerospace Mechanisms Symposium, by NASA.

NASA
Lyndon B. Johnson Space Center

Space News Roundup

The **Roundup** is an official publication of the National Aeronautics and Space Administration, Lyndon B. Johnson Space Center, Houston, Texas, and is published every other Friday by the Public Affairs Office for all space center employees. **Roundup** deadline is the first Wednesday after publication.

Editor Brian Welch
Assistant Editor Kelly Humphries

Latest astronaut candidates

(Continued from page 1)

Division at JSC. He received his bachelor of arts, his master's and his doctorate in physics at Cambridge University, and was born January 6, 1957 in Louth, England.

Gregory J. Harbaugh (MS)—Manager of the Schedules and Flow Office, Mission Operations Directorate at JSC, Harbaugh has a bachelor of science in aero- and astro-engineering from Purdue University, and a master's in physical science from the University of Houston at Clear Lake. He was born January 15, 1956 in Cleveland.

Mae C. Jemison (MS)—Jemison is a general practitioner with Cigna Healthplans of California, and holds a bachelor of science in chemical engineering from Stanford University and an MD from Cornell University. She was born October 17, 1956 in Decatur, Alabama.

Donald R. McMonagle (PLT)—A Major in the U.S. Air Force and an operations officer with the 6513th Test Squadron at Edwards Air Force Base, McMonagle holds a bachelor of science in astronautical engineering from the U.S. Air Force

Academy and a master's in mechanical engineering from California State University. McMonagle was born May 14, 1952 in Flint, Michigan.

Bruce E. Melnick (MS)—A Lieutenant Commander in the U.S. Coast Guard, Melnick is also an operations officer with the Coast Guard Air Station in Traverse City, Michigan. He holds a bachelor of science in ocean engineering from the U.S. Coast Guard Academy and a master's in aeronautical systems from the University of West Florida. He was born December 5, 1949 in New York City.

William F. Readdy (PLT)—Readdy is an aerospace engineer and pilot with the Aircraft Operations Division at JSC. He has a bachelor of science in aeronautical engineering from the U.S. Naval Academy, and was born January 24, 1952 in Quonset Point, Rhode Island.

Kenneth S. Reightler (PLT)—A Lieutenant Commander in the U.S. Navy, Reightler is the Chief Flight Instructor at the U.S. Naval Test Pilot School in Patuxent River,

Maryland. He holds two master's degrees, one in systems management from the University of Southern California, and one in aeronautical engineering from the Naval Postgraduate School. Reightler also has a bachelor of science degree in aerospace engineering from the U.S. Naval Academy. He was born March 24, 1951 in Patuxent River.

Mario Runco, Jr. (MS)—Runco, a Lieutenant Commander in the U.S. Navy, is Flight Liaison Officer with the Naval Western Oceanography Center at Pearl Harbor, Hawaii. He has a bachelor of science and a master's in meteorology, the bachelor's from the City College of New York and the master's from Rutgers University. Runco was born January 26, 1952 in Bronx, New York.

James S. Voss (MS)—A Major in the U.S. Army, Voss is an operations integration officer in the Vehicle Integration Office at JSC. He holds a bachelor of science in aerospace engineering from Auburn University and a master's in the same field from the University of Colorado. Voss was born March 3, 1949 in Cordova, Alabama.

Dunaway honored by MOD

Connie R. Dunaway, a secretary for over 20 years with the Production Integration Management Office, is this month's recipient of the Marilyn J. Bocking Award for Secretarial Excellence.

Dunaway was cited for coordinating a tracking system for change requests and transmittal forms between technical management and the STSOC contractor. Dunaway designed the transmittal forms herself.

The forms enable communications to go directly to and from her office and the specific employee who needs to handle them, without the correspondence having to go through intervening channels. The system has been credited with saving time and money, and Dunaway has instructed the Mission Operations Directorate secretarial staff in its use.

Besides creating the CR network, Dunaway also produced reports for the STS 51-L investigation, writes all the award fee committee



Connie R. Dunaway

reports, and has written or tracked all the technical direction documentation to the STSOC contractor.

Before the STS 51-L accident, Dunaway planned, coordinated and provided the secretarial support for the Spacecraft Analysis (SPAN)

Room. This required that she establish a schedule and coordinate approximately 35 secretaries in the SPAN room for 24 hours prior to a flight until 3 to 6 hours after its conclusion. According to Eugene F. Kranz, Director of Mission Operations, Dunaway not only handled all the SPAN room activities, but she also worked many of the shifts herself when others were not available.

Recently Dunaway exceeded her normal duties by assisting the budget personnel working in the Production Integration Office. During the time she was helping this office, it was involved with exercises related to the STS 51-L shutdown, in addition to normal budgetary activities. Such a workload required constant secretarial support to meet short deadlines, which Dunaway provided in a timely, efficient, and friendly manner, Kranz said. Dunaway still assists this office by training the secretaries in Xerox STAR word processing.

Lightning triggers rockets

Three sounding rockets awaiting launch from Wallops Flight Facility were simultaneously ignited by a lightning strike June 9 during a powerful electrical storm.

The unplanned launch of the three rockets sent an Orion sounding rocket and two smaller support rockets on short flight paths into the Atlantic Ocean.

The Orion rocket, with a scientific payload designed to study nighttime thunderstorm effects on the ionosphere, is 16-feet long and 14-inches in diameter. The two test rockets were four feet long and 2-3/4 inches in diameter.

The Orion was elevated two degrees above horizontal, awaiting the final countdown before being ele-

vated to near vertical, and shot 300 feet into the Atlantic. The smaller rockets, aimed almost vertical, are assumed to have flown their normal flight paths of about 15,000 feet in altitude and about 2.5 miles downrange, Wallops officials said.

NASA said the total value of the destroyed equipment is estimated to be under \$50,000.

The Orion and companion rockets were on the pad scheduled for launch between 9:30 p.m. and midnight. The rocket and the launch pad were secured and the personnel were in the blockhouse, per normal operating procedures. Wallops personnel were awaiting the severe thunderstorm to pass through the area when the incident occurred.

There was no damage to the pad.

Lightning also damaged the National Oceanic and Atmospheric Administration's weather satellite ground station at Wallops. NOAA said up to nine hours of weather data was lost from the two Geostationary Operational Environmental Satellites, GOES West and GOES East, before the ground station was returned to service. All six antenna systems designed to communicate with the GOES satellites were damaged, NOAA said.

Some 13,000 sounding rockets have been launched from Wallops Island since operations began there in 1945. This is the first time such an incident has occurred, NASA said. An inquiry is underway.

The projects should be relevant to science, math or technology. NASA intends to announce more specific guidelines after consultation with educators.

Representatives of the class, school or community which suggests the final name will be invited to a Space Shuttle launch.

OV-105

(Continued from page 1)

contest will be held during the 1988-89 school year. Details on the application process are expected to be formalized by the spring of 1988.

House Joint Resolution 559, introduced on May 10, 1986 by Congressman Tom Lewis (R-Florida), called for the name of any replacement orbiter to be selected from suggestions submitted by students.

Names submitted will be judged not only on suitability but also on the quality of the research project.

College scholarships earned

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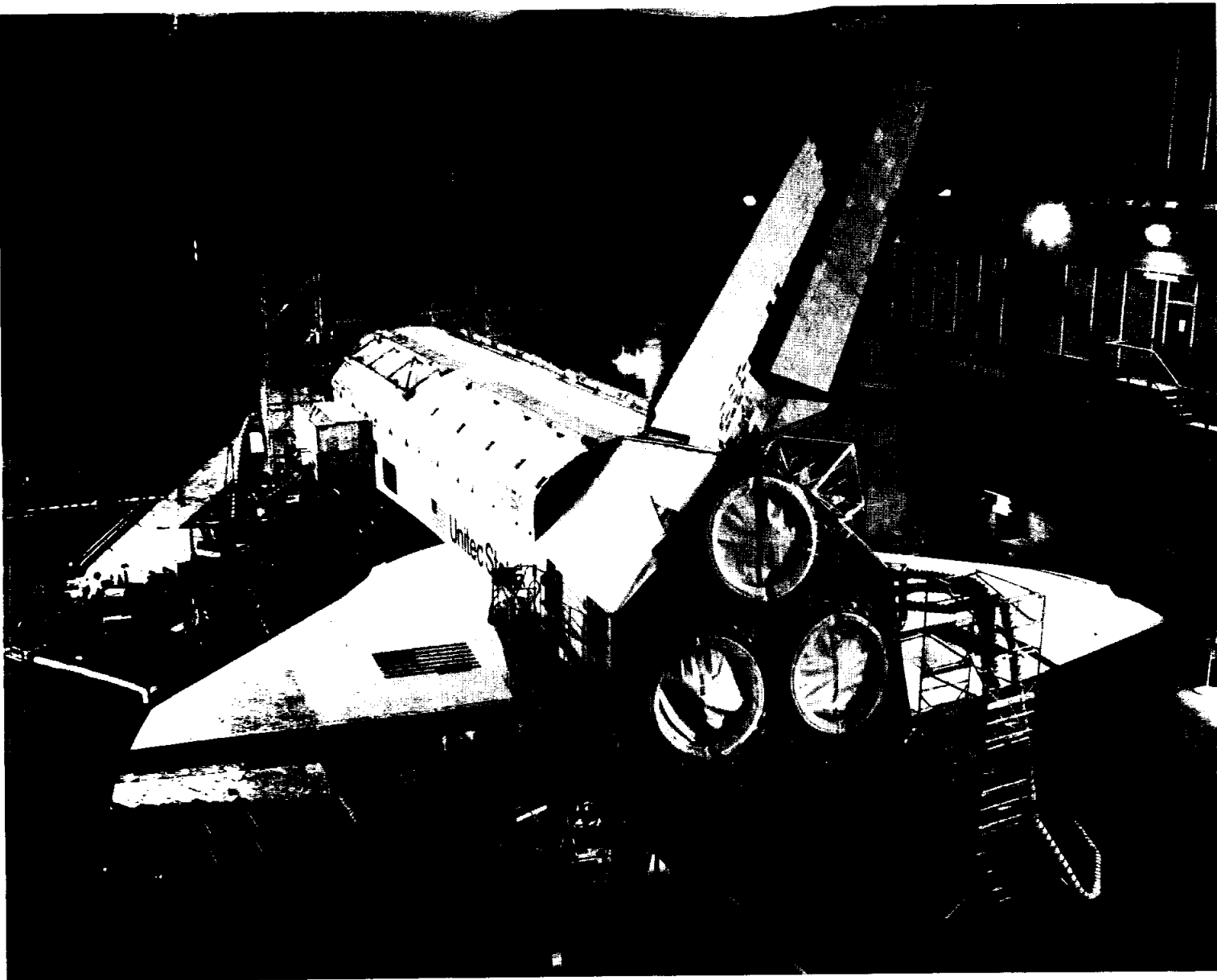
He graduated cum laude from Clear Lake High School in 1986, receiving the Delta Kappa Gamma writing award. He was active in high school music, clubs, youth organizations and community affairs.

Low graduated in June from Whittier (Calif.) High School, eighth in her class of 368. She was varsity

tennis team co-captain, and received many scholastic and athletic awards including a listing in Who's Who Among American High School Students. She was active in athletic, youth and community activities, and performed volunteer hospital work. She plans to major in engineering or biology at UCLA.

Bertrand graduated from South

Houston High School in June, ranking fourth in his class of 410. He was a member of the National Honor Society, and received a listing in Who's Who Among High School Students. He lettered in orchestra and has been active in athletic, club, church and community activities. He plans to study engineering at Texas A&M.



Recovery progress visible

Visible evidence of the Space Shuttle recovery effort is everywhere these days as Orbiters, solid rocket boosters and payload equipment are tested and processed.

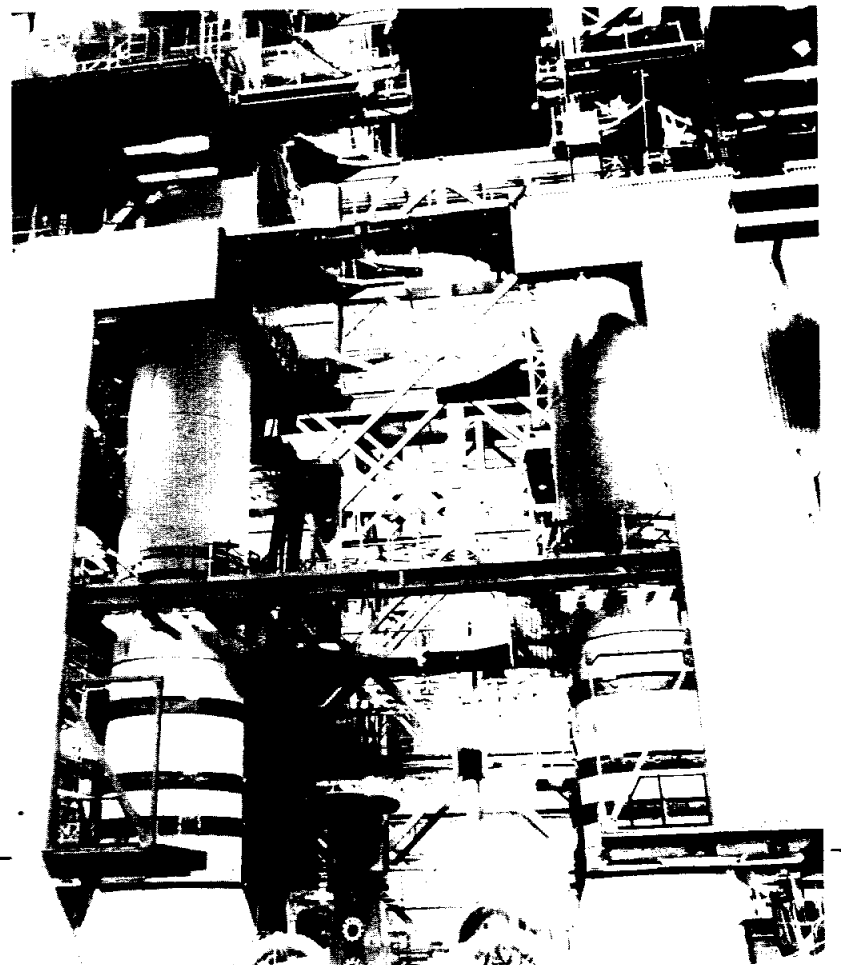
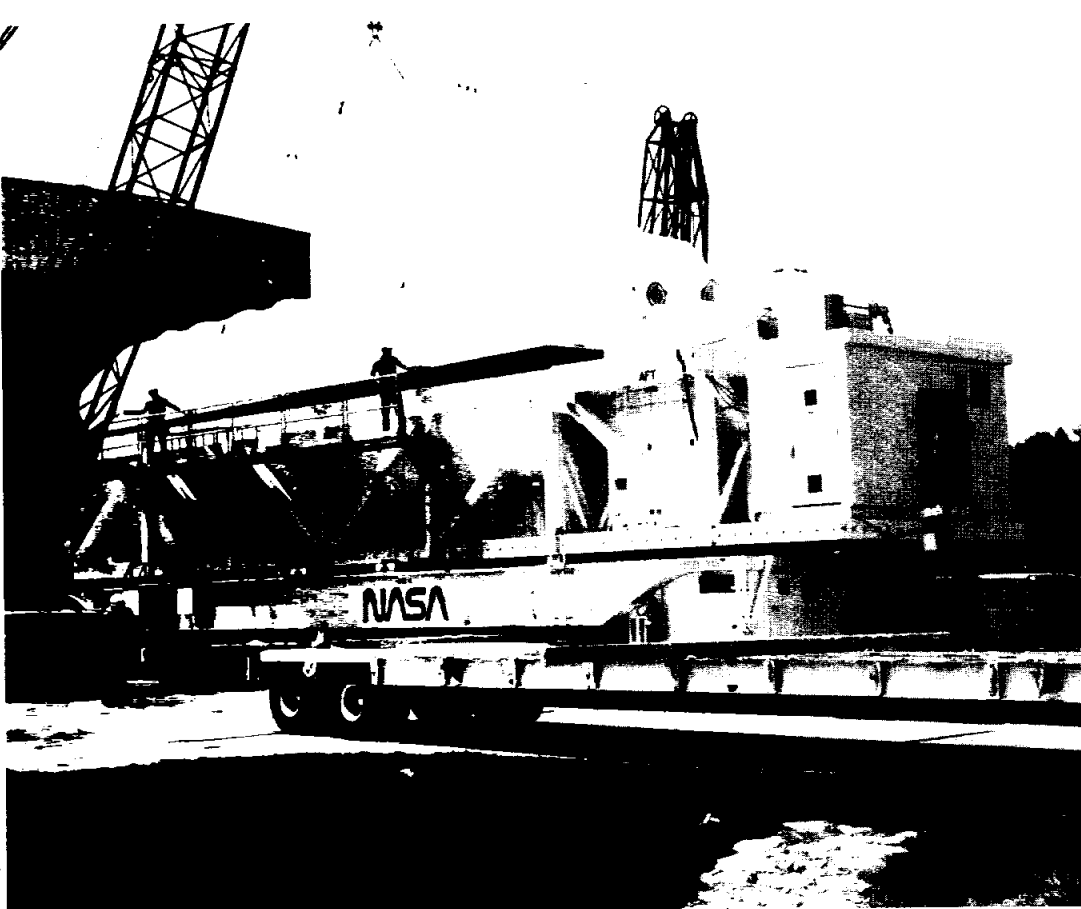
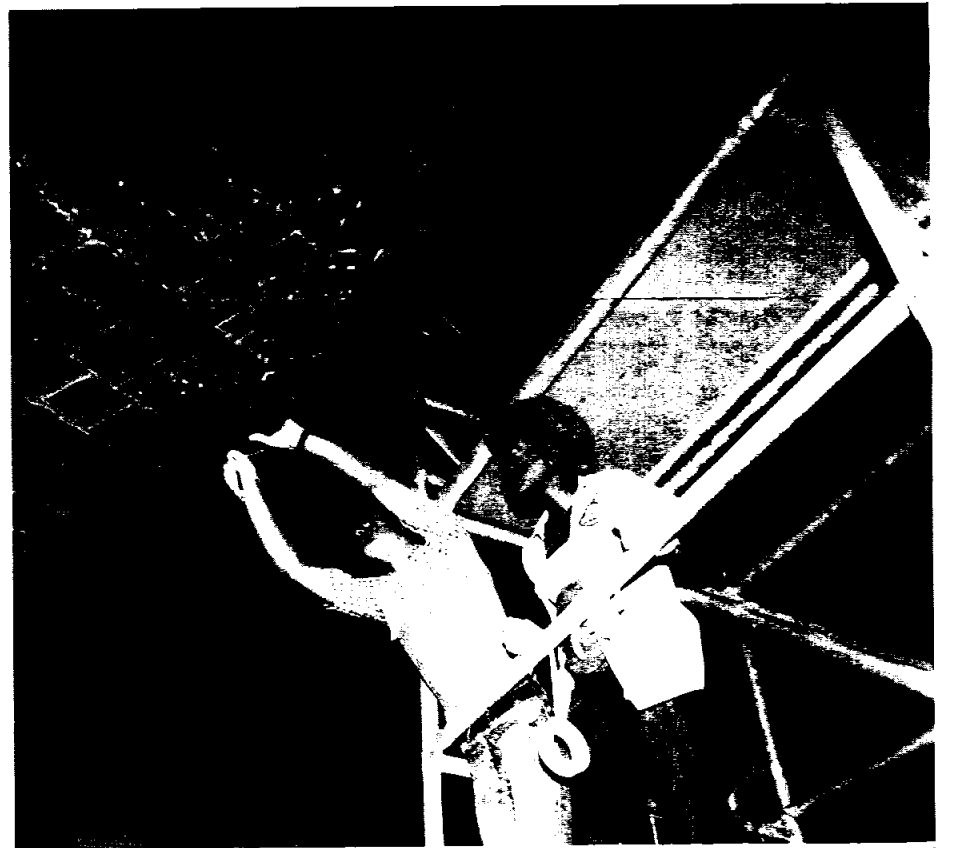
Left: *Columbia* is prepared for installation of advanced thermal protection blankets that will replace the thermal tiles around her sidewalls.

Below: two KSC workers get close to their work in the Vehicle Assembly Building High Bay 2.

Bottom right: solid rocket booster segments are de-stacked in High Bay 3, the last operation in the disassembly of *Atlantis*.

Bottom left: the 11,500-pound aluminum cap of the Hubble Space Telescope shipping container is removed at KSC as testing and checkout of the container continues.

Below left: the ETM-1A firing at Morton Thiokol's Wasatch Operations site in Utah tests several SRB redesign features.



Roundup Swap Shop

All Swap Shop ads must be submitted on a JSC Form 1452. The forms may be obtained from the Forms Office. Deadline for submitting ads is 5 p.m. the first Wednesday after the date of publication. Send ads to Roundup, AP3, or deliver them to the Newsroom, Bldg. 2 Annex, Room 147. No phone in ads will be taken.

Property & Rentals

Lease: Large CLC 2-2 condo, W/D, pools, playground, near daycare, \$330/mo. Manisha, x33340.

Lease: CLC, 2-1 condo, 24 hr. security, pool, tennis, \$400/mo. plus utilities. 480-5583 or 482-7156.

Lease: 3-2-2 single story home in The Landing S/D, fenced, FPL, corner lot, W/D, \$525/mo., deposit, pets OK w/addl. dep. 554-6031.

Sale: Univ. Green 2-2-2 home w/study, behind JSC, \$98,800. 656-3232 or 480-0447.

Sale: Property, 75' x 150' w/view of Taylor Lake, all utilities, \$19,500. 474-3181.

Lease: CLC 1 BR condo, FPL, microwave/fan, W/D, tennis, 2 wks. free. Briley, 282-1880 or 488-7901.

Lease: El Dorado Trace 1-1CP condo, W/D, security alarm, FPL, dishwasher, clubhouse w/weightroom, jacuzzi, 4 pools, \$350/mo. plus dep. Alan, 282-3968 or 334-7814.

Sale: Bacliff 4-2.5-2 home, assume, no qualifying, FPL, ceiling fans, new paint, \$800/mo. Linda, x32649 or 339-3073.

Lease: Baywind I 2-1.5-2 W/D, furnished, \$400/mo. plus elec. and 1 mo. dep. 333-3992.

Lease: 3-2 house on Lake Livingston, furnished, pier, fishing, skiing, swimming, weekend and weekly rates. 482-1582.

Sale: 2-2 '77 mobile home, set up at TAMU, 14' x 65', centr. A/C and heating, new carpet, \$9,500, Doug, x30964 or 480-2929.

Lease: 2-2 in Egret Bay, avail. 7/1, furnished, W/D, TV, microwave, fans, DW, Marion, x35947 or 481-2157.

Rent: Galveston Gulf-front condo, furnished, 2 pools, 3 whirlpools, 2 tennis courts, by wk./wknd. 480-5270.

Lease: large, 2-2 condo, W/D, pool, playground near daycare, \$330/mo. plus deposit. 280-9822.

Lease: 3-2-2 house in Piper's Meadow, dining rm., fenced, corner lot, gas appliances, one story, near pool, \$550/mo. 280-9822.

Lease: Baywind 2-1.5-2 condo, new paint, carpet, W/D, blinds, pools, game/exercise rms., \$365/mo. plus deposit. Don, 488-8844.

South Park Memorial Cemetery lots, \$395/ea. Cookie, x30328 or 474-5610.

Lease: CLC 4-2.5-2D house, dining rm., FPL, new paint, pro landscaping, wet bar, garage dr. opener, alarm system, \$795/mo. 482-6609.

Lease: Heritage Park 3-2-2 home, cul-de-sac, near school, refrigerator, lg. backyard, \$495/mo. 482-6609.

Lease: large El Dorado Trace 2-2-2CP condo, FPL, wet bar, W/D, new carpet, \$425/mo. Tim, x38843.

Rent/Option: 3 BR studio condo, FPL, W/D, new carpet, blinds, near pool, \$500/mo. Ariel, x43111 or 331-2203.

Lease: Egret Bay 2-2-2CP condo, fans, FPL, new carpet, \$390/mo. plus \$100 dep. and references. 486-8551.

Sale: Custom-built 4-2.5-2 home, large wooded lot, FPL, \$149,000. Jerry, x38922 or 474-4310.

Sale/Lease: Nassau Bay 4-2-2 townhouse, 2,200 sq. ft., new paint, lg. garage, deck, atrium, 20 ft. FPL, \$109,000 or \$790/mo. Jerry, x38922 or 474-4310.

Sale: 13.5 acres, gently rolling, wooded East Tx. land, fronts city, black-top, near Tyler and Henderson, assumable, low-cost, Tx. Vet. loan. McLeish 480-7445.

'84 Heritage 3-2 mobile home, 14' x 80', storm windows, garden tub, etc., on quiet, shaded lot. Take over loan. Terri, x36634 or (409)-925-4264.

Cars & Trucks

'83 Buick LeSabre, loaded, superior cond. Scott, x39156 or 488-3118.

'85 Chevy Cavalier, low mileage, ex. cond., 4-dr. sedan. Scott, x39156 or 480-3118.

'77 T-Bird, AC, power, AM/FM, \$650. Andy, x31596 or 488-5534.

'77 Monte Carlo, low mileage, A/C, good cond., best offer. 332-5065.

'85 Olds Cutlass Supreme Brougham, 21K mi., estate sale, \$7,600, Ben, x34486 or 668-4768.

'78 Buick Regal, good mech. cond., AC, PS, PB, V-6, AT, AM/FM radio, new transmission and alternator, \$1,800 OBO. Glenn, x30454 or 532-3013.

'82 Datsun 280ZX, turbo, auto/air, AM/FM/cassette, T-tops, plush int., ex. cond., \$5,500 OBO. Lisa, x36905.

'78 T-Bird Town Landau, 74K mi., good cond., velour int., \$1,200 OBO. Pam, x31088.

'79 Ford Bronco, 4WD, \$2,995. 471-5964.

'84 Chevy P/U, low miles. 471-5964.

'78 Ford 250 window van, 62K mi., PS, PB, AC front and rear, \$2,800 OBO. George H., 333-5660 or 326-1243.

'73 Mach I Mustang fastback, new 351 Cleveland Hi-Pro, C-6 trans., shocks, battery, alt., headers, much more, 95% restored, \$3000. 280-9030.

'71 Blazer 4 x 4, new brakes, rebuilt engine, 350-4 BBL, \$2,180. 326-4613.

'78 Plymouth Volare, 2-dr., PS, PB, auto, 87K mi., \$900 cash OBO. 481-6528.

'64 Dodge Dart, slant 6, 3-spd. manual, 4-dr., needs a battery and two tires, \$175 OBO. Chuck, x35416.

'85 944 Porsche, 12K mi., alarm, window tint, stereo, garaged, perfect cond. 488-7908.

'76 Jaguar XJ12L, auto, AC, PB, PS, PW, stereo, ex. cond., \$6,500. Nicolas, 282-3307 or 486-4016.

'59 Mercedes-Benz 220S. David, x35464.

'65 Ford, 240 CID, 6 cyl w/ 3 spd. Cruise-o-matic trans. and accessories, \$150. Kevin, x32413 or 486-4545.

'75 Lincoln Towncar, new engine, PS, PB, AC, good tires, \$1,400. Scott, x37663 or 482-7775.

'79 Datsun 210, ex. cond., 4-spd., AC, AM/FM, new tires, \$1,300 OBO. Sajjad, 282-3267 or 484-1820.

Boats & Planes

Narco HT-830 hand-held VHF (aircraft) transceiver, 720 comm/200 nav capability, programmable, scanning, memory, etc. w/charger, 1 mo. old, \$375. Chuck, x32590 or 486-7141.

Used anchors: Dansforth's models 45, 5300, 85 and 5600, \$12/ea., model 135 for \$15; Boyles anchors \$10; Navy anchors, 15 lb., \$10. 486-8279

1976 Glasstron boat, 16 ft. w/70 hp. Evinrude, incl. trailer \$2,000 or BO. Reta, x37883 or 337-5482.

Seahorse sailboat on galvanized trailer, 16 ft., garaged, ex. cond., \$325. Joe, x31057 or 488-3866.

'77 Mooney 201, 1630 TTA & E. dual 170 B's, ADF, DME, GS, mode C, Century II, stormscope WX-9, intercom, hangared, \$42,900. Dennis, x31966.

Nacra 5.8, 19 ft. Catamaran, ready to day sail or race, mast rotation control, trailer, sail box, extras, \$3,500. Kevin, x32413 or 486-4545.

Catamaran, AMF Trac, 18 ft., galvanized trailer, many extras, \$3,750. 333-3056.

Half-scale P-51D plans, unused, w/updates, newsletters, builder's manual, etc. \$150. Chuck, x32590 or 486-7141.

Motorcycles

'81 Honda CB750 custom motorcycle, ex. cond., 7,100 mi., \$1000 OBO. Brian, 480-5527 between 10 am & 3 pm.

'79 Honda CX500 custom, shaft drive, fairing, hard saddle bags, luggage carrier, good cond. w/service manual, \$800. Rick, x36900.

'80 Honda 750, custom model, low miles and good cond., garaged, \$1,475. Charles, 481-3637 or x30092.

Hondamatic cycle, low mileage; custom captain van seats, brown & tan, like new. Make offer. 488-3354.

Recreational

Go-cart, Briggs & Stratton, 2-seater, ex. cond., \$350. Linda, 339-3073 or x32649.

Go-cart, 2-seater, Briggs engine, good cond., \$150. 482-1633.

Go-cart, good cond., 3.5 hp., \$275. Scott, x37663 or 482-7775.

Maerklin HO gauge and N gauge toy trains. 326-3095.

Computers

Plastic covers for Commodore 128 computer, disc drive, monitor and printer, \$4/ea.; Joy stick \$14; Commodore 64 and 128 software cheap. Manuel, x37333.

Compaq portable computer, dual floppy, AST 6 pack, 560K RAM, comm board, \$995. H. Mandell, x36557.

King's Quest software, original disc and documentation, \$15. George, x37005.

Commodore 300 baud modem, model 1660, new, \$35; Commodore 1526 printer, needs new print head, \$50. J. Samouce, x35053.

IBM PC XT, IBM MB hard disc, IBM monochrome monitor, 640K, floppy drive, \$1,250. Charles, 481-3637 or x30092.

Apple IIe, new enhanced motherboard, 128K, modem, 2 drives, \$850. Gordon, x30518 or 486-4403.

TRS-80 color monitor, disc drive, table and accessories, \$500. 280-9025.

Commodore 64 software: Simons Basic, \$12; Sideways, \$18; Mail List, \$4; Heswriter 64, \$5; Practifile, \$5; Commodore 128 software: Timeworks Partner, \$24; Timeworks Data Manager, \$24, Superbase, \$24. 481-0468.

Household

Copper-bottom cookware, never used. 10-pc. set, was \$130, now \$95, Mandy, 480-2265.

Early American couch and loveseat, \$350. Lyn, x37916.

Used furniture for rent. 488-7113.

Full size mattress, Regal, firm, 1 yr. old, \$40; king size set, \$100. Dennis, x31966.

Color TV, 19", \$60; Rowing machine, \$30; Sit-up seat, \$15. Fred, x38213 from 11:30 pm.-7:00 am. or 480-7550.

3 upholstered chairs, ex. cond., 2 matching, tannish gold, one brown and tan striped, \$30/ea. Laverne, 326-1404 or 38464.

Zenith color TV, 19", table model, ex. cond., \$130; Bose 501 speakers, ex. cond., \$325/pr. Joe, x31597 or 996-1667.

Jr. bedroom set w/headboard, dresser, nightstand, full size mattresses, \$175. Cindy, x38604.

Kenmore vacuum cleaner, 3 hp., canister type w/self-adjusting power agitator, like new, \$115 incl. all attachments. 482-9168.

Falcon Mark 5 cast aluminum gas grill w/steel post, \$98; crutches \$10; GE clock radio/telephone, \$19. 481-0468.

Hide-a-bed couch, easy chair, both in fair cond., \$10/ea; Hoover vacuum cleaner, \$15; Toaster oven, good cond., \$10. Rick, x38088.

Microwave, Sears "Best", full size, programmable, temp. probe, like new, \$200 OBO. Mark, 280-6637 or 326-1192.

Two brown vinyl chairs, ex. cond., \$50/pr. OBO. Lee, x36186 or 488-7646.

Sofa, loveseat & chair, \$125 OBO; twin mattress & box springs \$50 OBO. 480-2870.

GE Coppertone refrigerator, frost-free, good cond., \$200; weight bench, \$30; Boys' baby clothes. Carolyn, 480-9102.

24 cu. ft. Side by Side refrigerator, self-cleaning; elec. double oven; Make offer. 488-3354.

Photographic

Canon A-1, ex. cond., \$125; Canon Winder AZ, like new, \$40; Kiron 28-210mm f/4 zoom lens for Canon, mint cond., \$85. John, x30762 or 538-2327.

Canon G3 w/f1.7 40mm lens, auto/manual exposure, Canonlite flash, case, \$100 OBO. Dennis, x34405 or 480-5076.

Minox Minolta camera stand and lightmeter. 326-3095.

Pets

Dachshund AKC pups. 664-0901 or 489-9743.

AKC Lab. puppies, born May 15, 5 black, 2 yellow (1 female yellow), Field Champion bloodline. Sire also on premises, \$200/ea. Mary, x32685 or 482-1045.

2 free parakeets, 1 blue, 1 yellow, 2.5 yrs. old, raised together, plus cage & feed. My cat wants them, too! Hank, x33261.

AKC registered Lab. puppies, 4 males & 4 females, black & chocolate, 6 wks. old, \$150-\$200. 474-7011.

Golden retrievers AKC registered, large but gentle. Earl, x33124 or 326-2354.

Free young, female cat, white, spayed. Lillian, 649-7516.

AKC Cocker pups born May 14, show quality, parties and blacks, champion bloodlines, shots, wormed, \$250. Terri, x36634 or (409) 925-4264.

Free kittens: 3 black, 2 gray & white tabbies; Free neutered cats. Mary, x34251 or 941-8622.

Musical Instruments

Piano, Chickering Spinnet, approx. 40 yrs. old, needs tuning, \$850 OBO. 487-7364.

Buffet Clarinet, ex. cond., \$450. Diane, x31865 or 471-3303.

5-piece Rodgers drum set, w/cymbals, high hat, extras, \$600. Sajjad, 282-3267 or 484-1820.

Spencer flute, closed hole, C Concert, ex. cond., \$300. 488-6521.

2 acoustic guitars, barely used, \$150/ea. Tim, x38843.

Lost & Found

Lost: Gold men's wedding band, lost Wednesday, June 3 at Gilruth. Eric, x38420 or 484-9179.

Found outside Bldg. 1: "Challenger" lapel pin. Herb, x38833.

Wanted

Want refrigeration dolly and repairable A/C units, free removeable. Johnson, x36580 or 339-2713.

Want non-smoking carpooler from Spring (HS) to JSC, hours 7 am.-3:30. Patnesky, x38636, Panna Amin, x32459 or Roy Parker, x38233.

Want non-smoking female to share 2-2 condo on El Dorado Way, W/D, microwave, \$200/mo. plus half elec. Linda, 282-4189 or 488-0766.

Want slide rules, need for education project, will accept donations or pay small fee. 326-3095.

Want witnesses to auto accident that happened on 6/6/87 at 11:20 pm., intersection of El Camino and NASA 1. J.M. Gill or D.K. Prescott, 332-5622.

Want TI 99/4A computer console in working cond., will pay \$25; Terminal emulator (TE II) cartridge, will pay \$10. William, x30842 or 488-0621.

Want to swap children's educational software and games for IBM PC or Macintosh. Carolyn, 480-9102.

The Junior Astronaut Corps seeks volunteers to participate in community activities. Allan, 778-4183.

Want father-son motorcycles, 70-90 cc. dirt bike for 9-yr. old, 125-200 cc. dirt/street legal for Dad. Gary, x33786 or 499-5786.

Want men and women's V6 bicycles, 10 spd. preferred, and small, working microwave. Cheryl, 334-1303 or x54406.

Want TRS-80 Model I (Level II) and Timex/Sinclair 1000 computers w/assemblers, editors. Wilber, x37341.

Want baby items: used portacrib, swing and stroller. Marilyn, x33536 or 488-3965.

Miscellaneous

Machinist's new precision caliper. Mauser, stainless steel, 6" dial measures

inside and outside depth, \$85. Cookie, x30328 or 474-5610.

Estate sale, June 27 and 28, 8-6 pm., Antiques, appliances, cars, 4126 Trail Lake Dr., off S. Post Oak. 944-2765.

Window A/C, 1-1/2 tons, 220V, \$100; GE frost-free refrigerator, \$100. Harry, x31551.

Circular saw, 7-3/4", new; TI programmable calculator SR 52, new; Air Force Seiko watch, new; antique fire-arms and pistols. 326-3095.

NASA mementos: publications, posters, etc. 488-5546.

Sears Coldspot, 5,000 BTU window A/C, \$100 OBO. Herb, 335-8541 or 481-2129.

File cabinets, legal, full extension, 4 dr./\$75, 5 dr./\$85; desks, secretarial, 1-walnut w/chair, \$150, 1-metal w/chair, \$150. Dick, x36580.

A/C compressor unit, 4 tons, \$400; 15 ft. x 20 in. formica bar top, \$50. 554-2908.

Luggage, brown, 2 pieces: 22" x 14", and 25" x 18", \$28 for both; Bathroom set, dk. green, 34" x 23" rug; seatcover, 2/ea. bath towels, hand towels, wash-cloths; shower curtain, \$35 OBO for all. Valerie, x38385 or 484-9021.

1 pr. blue '85 300ZX floor mats, T-top bags and service manual, \$100 for all. 554-4141.

4 radial tires, Carleton Zodiac, steel-belted, new, P185/75R13, \$110; '79 LUV parts, engine, transmission set, \$500 OBO for all. Paul, x34266.

1 pr. blue '85 300ZX floor mats, T-top bags & service manual, \$100. Andy, x39377.

Radial tires, Carleton Zodiac, 4, steel-belted, new, P185/75R13, \$110. Paul, x34266.

Cookin' in the Cafeteria

Week of June 22 — 26, 1987

Monday — Cream of Chicken Soup; Beef Burgundy over Noodles, Fried Chicken, BBQ Sausage Link, Hamburger Steak (Special); Buttered Corn, Carrots, Green Beans. Standard Daily Items: Roast Beef, Baked Ham, Fried Chicken, Fried Fish, Chopped Sirloin. Selection of Salads, Sandwiches and Pies.

Tuesday — Beef Noodle Soup; Baked Meatloaf, Liver & Onions, BBQ Spare Ribs, Turkey & Dressing (Special); Spanish Rice, Broccoli, Buttered Squash.

Wednesday — Seafood Gumbo; Broiled Fish, Tamales w/Chili, Spanish Macaroni (Special); Ranch Beans, Beets, Parsley Potatoes.

Thursday — Navy Bean Soup; Beef Pot Roast, Shrimp Chop Suey, Pork Chops, Chicken Fried Steak (Special); Carrots, Cabbage, Green Beans.

Friday — Seafood Gumbo; Broiled Halibut, Fried Shrimp, Baked Ham, Tuna & Noodle Casserole (Special); Corn, Turnip Greens, Stewed Tomatoes.

Week of June 29 — July 3, 1987

Monday — Chicken Noodle Soup; Wieners & Beans, Round Steak w/Hash Browns, Meatballs & Spaghetti (Special); Okra & Tomatoes, Carrots, Whipped Potatoes. Standard Daily Items: Roast Beef, Baked Ham, Fried Chicken, Fried Fish, Chopped Sirloin. Selection of Salads, Sandwiches and Pies.

Tuesday — Beef and Barley Soup; Beef Stew, Shrimp Creole, Fried Chicken (Special); Stewed Tomatoes, Mixed Vegetables, Broccoli.

Wednesday — Seafood Gumbo; Fried Perch, New England Dinner, Swiss Steak (Special); Italian Green Beans, Cabbage, Carrots.

Thursday — Cream of Chicken Soup; Turkey & Dressing, Enchiladas w/Chili, Wieners & Macaroni, Stuffed Bell Pepper (Special); Zucchini Squash, English Peas, Rice.

Friday — Independence Day — Holiday.