



ROUNDUP

NASA LYNDON B. JOHNSON SPACE CENTER

HOUSTON, TEXAS

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Friday, February 18, 1977

Orbiter to take its first flight today

Shuttle vehicle set for 'piggy-back' ride atop 747

The first unmanned captive flight of Orbiter Vehicle 101 was scheduled for today, Feb. 18, at Edwards AFB, Calif.

The special Boeing 747 Shuttle Carrier Aircraft with the Orbiter "mated" to its topside was scheduled to takeoff from Runway 22/04 at approximately 10:30 a.m. Houston time.

The mated vehicles were to climb to an altitude of 16,000 feet

and there begin a two-hour series of tests designed primarily to measure the aerodynamic handling characteristics of the Orbiter. Maximum speed will be 250 knots (287.5 mph).

Approach and Landing Test (ALT) crewmen Fred Haise, Gordon Fullerton, Joe Engle and Richard Truly are expected to man two of the T-38 chase planes which

will follow the Orbiter/747 throughout the tests.

Crew members of the 747 are Fitzhugh L. Fulton Jr. and Thomas C. McMurtry, pilots; Louis E. Guidry Jr. and Victor W. Horton, flight test engineers. Guidry is from JSC. The others are from Dryden Flight Research Center.

Friday's flight is the first of six planned captive inert (mated and

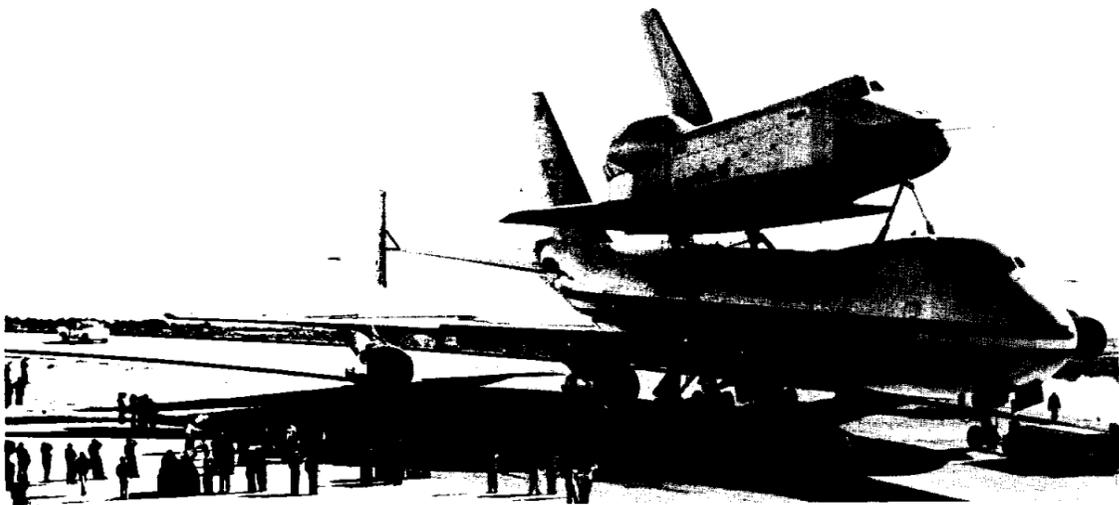
unmanned) flights for the Orbiter/747. The others are scheduled for Feb. 24 and March 1, 3, 7, and 9.

The captive inert flights will conclude Phase 1 of ALT which began Feb. 1 with the taxi tests at Dryden. During these three tests, the Orbiter/747 was taxied along Runway 22/04 at speeds up to 135 knots (155.25 mph). The taxi tests followed 50 hours of mated ground

vibration testing which began Feb. 10.

Upon completion of ALT Phase 1, the Orbiter and 747 will be demated and the Orbiter will have equipment added and undergo extensive checkout in preparation for the first of six manned captive flights scheduled for May 26.

Eight free flights with the Orbiter landing at Edwards AFB are expected to begin in July.



Mated Orbiter and 747 attract curious employees at Dryden (More photos, page 4)

Lunar Conference to begin March 14

More than 600 scientists from around the world are expected to attend the 8th annual Lunar Science Conference at JSC March 14-18. The conference is sponsored by the center and the Lunar Science Institute.

New information gained about the Moon from a variety of scientific studies of lunar samples and data obtained from Apollo surface

and orbital experiments, and new interpretations and refinements of previous models of lunar origin and history will be presented at the conference.

This eighth consecutive lunar science meeting is also the second "planetary" science meeting, continuing a trend begun at last year's conference where topics of planetary interest were introduced.

The conference was expanded to include the planets because of the accumulating data from the recent NASA and Soviet exploratory missions to Venus, Mercury, Mars and the outer planets. These missions provided important data on planetary origin and evolution, matters of primary concern to lunar scientists.

This year's conference will include papers based on the recent exploration of Mars by the Viking spacecraft.

Also for this year's conference the Soviet Union will present lunar material from their recent Luna 24 mission to NASA scientists for examination and analysis.

A delegation of Soviet scientists will present five half-gram-size samples retrieved by the Luna 24 spacecraft last August. Two samples from the Luna 24 mission are already at the JSC Lunar Curatorial Facility. They were presented to the agency last December at ceremonies in Moscow.

The Luna 24 samples represent material from an area not previously sampled by either the U.S. Apollo program or the U.S.S.R. Luna program.

The conference will open with a general session followed by four days of concurrent sessions concerning the various topics outlined.

Conference cochairmen are Dr. Michael Duke, acting chief, Lunar and Planetary Sciences Division, and Dr. Robert Pepin, outgoing director, Lunar Science Institute.

Irish bicyclist pedals around world to JSC

Many foreign tourists visit JSC. But Michael O'Connor of Dublin, Ireland, must be the first to pedal a bicycle across much of Europe, Asia and North America along the way.

The amiable 19-year-old who toured the center Feb. 8 is nothing if not self confident. When he began planning his around-the-world trip, O'Connor had done little cycling and did not even own a bike.

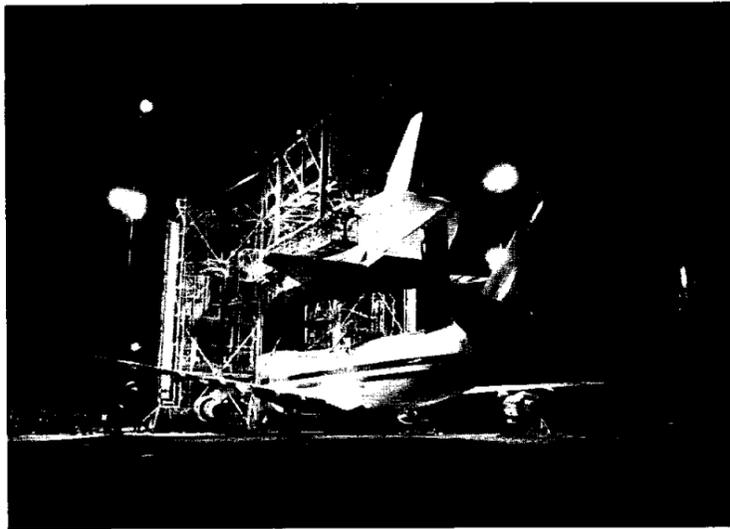
He left Dublin 12 months ago

with a letter of introduction from the mayor, a little money in the bank, a new 10-speed bicycle and a strong will.

"The farthest I'd ever (cycled) before was 15 miles," he said. "When I left and I'd gone 15 miles I knew I'd gotten somewhere."

When O'Connor returns home to Dublin in time for his 20th birthday May 15 he will have visited 20 countries and estimates he'll have

(Continued on page 2)



Orbiter hangs suspended before attachment to 747

Symposium '77 to draw 2,000 students

More than 2,000 students from Texas junior and senior high schools will visit JSC March 1-3 as the center plays host to NASA Symposium '77.

The symposium, a first-of-its-kind event for the agency, is designed to motivate youth to enter engineering or science careers. It is particularly aimed at female and minority students.

Approximately 175 JSC employees will take part in the symposium in such ways as conducting workshops, judging science papers or speaking about their own careers and thus acting as "role models."

School districts from 17 cities across the state have been invited to send students and counselors to the symposium. About 700 are expected to attend each day of the event.

Also invited have been administrators and department heads of colleges and universities which enroll high percentages of minorities and women.

A seminar will be held for the college participants to let them know about NASA's research, training and employment opportunities - information which they would hopefully make available to

their students.

Employees of both JSC and several contractors will be involved in the program which will utilize the Bldg. 2 and 30 auditoriums and appropriate job-site areas.

Five themes have been developed for the symposium. They are: Space Research Activities - Past, Present, Future; Space Technology - Its Practical Applications and Benefits; NASA's Research and Development Program; Motivating Minorities and Women into Science and Engineering Careers, and Future Careers in Science, Engineering and Technology.

Science papers submitted in advance by student participants will be judged by professional scientists and engineers. Three awards will be given each day to writers of outstanding papers.

A special guest at the symposium will be actress Nichelle Nichols of the *Star Trek* television series.

Programs similar to NASA Symposium '77 have been held in the past at three universities. This will be the first time the agency has sponsored one of the events. A similar symposium has been scheduled at Kennedy Space Center, Fla.

Med test subjects are sought

Life Sciences needs 20 JSC employee volunteers, both men and women, to undergo medical testing which will assist in planning for medical screening of Shuttle astronaut candidates.

The five-day program, March 28-April 1, will consist of established clinical tests, special NASA tests and examination of participants by consulting specialists. Significant medical findings will be reviewed with the participant.

Volunteers for the evaluation must not be current applicants for pilot or mission specialist astronaut candidate positions.

NASA employees interested in participating can call Mary Easley, X-4021.

Jim Oberg wins essay competition

James E. Oberg of the Spacecraft Software Division has been named winner by the National Space Club of its annual Robert H. Goddard Historical Essay Contest Competition for 1976.

Oberg's winning paper is titled "Korolev, Khrushchev and the Sputnik" and deals with the behind-the-scenes political maneuvering in Russia which led to the decision to proceed with the Sputnik launch in 1957.

A certificate and \$500 cash award will be presented to the winner at the annual Robert H. Goddard Memorial Dinner in Washington, D.C., customarily held in April.

Oberg, 32, is an Air Force captain and software analyst detailed to NASA for the Space Shuttle program.



WORLD TRAVELER — Michael O'Connor, 19, of Dublin, Ireland

Irish bicyclist ...

(Continued from page 1)

traveled 32,000 miles, 11,000 of that by bicycle.

He's had money stolen from him in Turkey, Thailand and California, been hospitalized with dysentery in Iran, acquired a tapeworm in India and been chased by wild dogs in Greece — but O'Connor has kept going.

When he stopped by JSC on his way to Galveston, the teenager was looking forward to reaching New Orleans for Mardi Gras and Chicago in time for the St. Patrick's Day celebration.

During the several hours he spent at the space center, O'Connor

was treated to lunch, given a tour of the facilities and shown the interior of the Orbital Workshop in Bldg. 5 by Astronaut Jack Lousma.

In the course of the day, he was befriended by two Clear Creek High School coeds who took him to the dress rehearsal of a play at the school, the first American school he had visited.

After spending the night with a local family, O'Connor set off again. The good wishes of many people in the Bay Area went with him as he pedaled away.

JSCrossword

(See puzzle page 3)

A	N	Y	D	W	A	E	T
N	I	R	O	N	R	E	
S	K	A	C	T	S	I	O
		P	S	A	S		
R	E	T	E	M	T	I	A
O	G	U	H	R	L	U	B
N	A	C	S	G	A	N	B

Civilian astronaut applicants total 1375

The Astronaut Candidate Program Office reported Feb. 14 that 1,375 applications have been received for civilian astronaut candidate positions.

Mission specialist applications totaled 1,117. There were 258 pilot applicants. Of all applications returned, 168 were from women.

Gilruth remembers H.J. 'Harvey' Allen

H. Julian "Harvey" Allen, director of Ames Research Center from 1965-69, died Jan. 19 at the age of 66.

Allen came to work for NACA, the predecessor of NASA, at Langley Field, Va., in 1936. He is credited with originating the blunt end reentry concept used for manned spacecraft.

Dr. Robert R. Gilruth, former director of the Manned Spacecraft Center (now JSC) knew Allen since 1937. Following are some of his memories of his long-time friend:

"Harvey Allen was a great big man. . . a very talented engineer who loved life. He loved old autos and had a collection of touring cars of about 1920 vintage.

"He was a musician and wrote some delightful compositions, mostly for children. He loved to

travel, particularly to Mexico. He was loved by a great many people.

"Outside of music and aerodynamics, Harvey's principal hobby was meteorites. It was his thoughts relative to meteorites which caused him to get interested in the reentry problem for which he was most famous. . . He proposed a spherical shape.

"He (also) did a great deal of the work in devising the air foil shapes used in today's aircraft.

"Right after the A-bomb was dropped and supersonic aircraft were deemed so important NACA formed the High Speed Panel. Harvey Allen was one of four members.

"I liked Harvey and I'll miss him. . . He loved all the good things in life. It won't be quite the same without him."

Joseph Yoder picked Co-op of the Month

Joseph W. Yoder, a junior student in electrical engineering at Virginia Polytechnic Institute, has been chosen JSC Co-op of the Month for February.

Yoder is currently serving his third work period with the Environ-

mental Effects Office, Science Payloads Division.

In nominating Yoder for the award, Dr. Wilber R. Boykin said the student is self-motivated, possesses dedication, initiative and a professional attitude and requires little supervision.

"Mr. Yoder's past accomplishments include assisting with taking ultraviolet absorption data, developing computer programs for reducing these data and conversion of a large-scale graphics software system to run on the PDP 11/45 computer," Boykin said.

"Mr. Yoder has earned the respect and confidence of his co-workers through his demonstrated ability and accomplishments. It is with pleasure that I nominate him for Co-op of the Month for February 1977," Boykin concluded.

Spaceport rescues cold-stunned sea turtles

KENNEDY SPACE CENTER, FLA. — Cold-stunned sea turtles occupying the shallow waters surrounding the center have been given warm refuge in a wildlife laboratory building and recreational swimming pond.

After temperatures in the low 20s swept Florida on three nights in January, 140 cold-paralyzed green, loggerhead and Atlantic Ridley sea turtles surfaced on the waters of Mosquito Lagoon and the Indian and Banana Rivers or were beached

on their shores.

The Atlantic Ridley is on the endangered species list and the greens and loggerheads are candidates for the same listing. The size of the turtle population turned up by the freeze far exceeded the expectations of local wildlife authorities.

The giant reptiles are sensitive to water temperatures below about 50 degrees. Temperature readings in Mosquito Lagoon, for example, were plunged to 39 degrees by the succession of below freezing nights.

Robert Yoder, manager of the Merritt Island National Wildlife Refuge which has been established on NASA lands not in operational use, said the reptiles surfaced after they were "almost anesthetized" by the plunging water temperatures.

For several days after the freezes, fishermen, private citizens, personnel from the U.S. Fish and Wildlife Service and Florida Marine Patrol, and students from Florida Technological University (Orlando) located, reported or brought the reptiles to the FTU field laboratory on the northern end of the Kennedy Space Center.

The largest — a loggerhead — weighed 243 pounds. The largest green weighed 130 pounds.

The lethargic turtles were kept in small wading pools or on their backs in the FTU laboratory for several days in hopes that rising water temperatures would permit their return to their natural habitat.

But the waters warmed only

slightly and threats of new cold waves prompted removal of more than 100 of the larger reptiles to a 180-foot diameter, eight-foot deep swimming pond at the recreation area on the south end of the center on January 25.

The large pond is fed by artesian springs pouring 75-degree water into the pool. Cooled by ambient air to about 64 degrees, the pond provides temperatures more acceptable to the turtles.

Dr. L. M. Ehrhart, an animal ethologist at FTU, which has a contract with KSC to conduct a baseline ecological study of the Spaceport, said the turtles would be held in the pond until rising water temperatures permitted their return to the surrounding estuaries.

The remaining turtles — somewhat smaller — were kept in four water-filled, six-foot diameter plastic wading pools which have been moved into the field laboratory.

The rare Atlantic Ridley was

rated a real find and wildlife experts were delighted at the unexpectedly large number of green turtles. The greens constituted approximately 80 percent of the turtles forced to surface by the cold water and are somewhat rarer than the giant loggerheads which come to KSC beaches in large numbers to lay their eggs during the summer months.

In a sense, the paralysis of the turtles by the cold proves that there's a silver lining in every freeze.

Part of the FTU effort involves netting and tagging turtles for release but netters have succeeded in catching only relatively few during the past year.

The labor expenditure ran 40 man-hours per turtle and the opportunity to tag the reptiles provided by the freeze provided a bonus of approximately two and a half man-years of netting and tagging effort.



ROUNDUP

NASA LYNDON B. JOHNSON SPACE CENTER

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Photographer: A. "Pat" Patnesky

Credit Union offers final ballot chance

JSC Federal Credit Union members who did not meet the nomination deadline for the March 11 election may still get their names on the ballot by submitting a petition signed by 100 members.

Regular nominations to fill three positions on the board of directors and one vacancy on the credit committee were accepted through Feb. 11. Any member whose name was submitted by that deadline will be on the ballot.

Anyone seeking nomination by

petition should contact Jerry Haptonstall, X-5449, for the proper petition format. Signed petitions must be filed with Jim Dallas, board secretary, no later than Feb. 25.

Petitions must be accompanied by a certificate from the nominee stating that he or she is agreeable to nomination and will serve if elected.

The poll will be open from 8 a.m. to 2 p.m. March 11 at the credit union building. At 4 p.m. it will reopen at the Bldg. 2 auditorium and remain open until the JSC Federal Credit Union's annual meeting is called to order at 7:30 p.m. No nominations will be accepted from the floor.

Holland heads new club

The newly-formed Exchange Club of the Bay Area-NASA received its charter Jan. 29 at a formal dinner-dance at the Lake-wood Yacht Club in Seabrook.

John Holland Jr., chief of the Technical Laboratory Branch, Photographic Technology Division, is president of the new club.



Holland

The National Exchange club is a service organization with more than 50,000 members nationally. Its hundreds of community clubs sponsor a wide range of citizenship and community service programs.

The Bay Area-NASA club was chartered with 35 members, including about 10 JSC employees. It meets for breakfast every Friday from 7-8 a.m. at the Holiday Inn on NASA Road 1. For information about the club, contact Holland at X-4639.

Lunar data is subject of meeting

Members of the Clear Lake chapter of the Association for Computing Machinery will be brought up to date on lunar science at their next monthly meeting, Feb. 24.

John W. Harris of the Curatorial Branch, Lunar and Planetary Sciences Division, will be guest speaker at the luncheon meeting to be held at the Gilruth Recreation Center.

Harris' discussion, illustrated with slides, will include updated results of lunar sample analyses and theories of the origin, age and composition of the Moon.

A lunch of pepper steak will be served at 11:30 a.m. followed by the talk at noon. Cost is \$2.75 and the meeting is open to both members and nonmembers. For reservations contact Sue Stanberry, 488-0080, X-231, by Feb. 22.

EAA ATTRACTIONS

TICKETS

The following tickets are available at the Bldg. 11 Exchange Store from 10 a.m.-2 p.m., Monday - Friday:

Houston Aeros - EAA discount gift coupons may be exchanged at the Summit box office for "live" tickets on the night of the game. A \$6.50 coupon gets you an \$8 ticket, \$5.50 gets a \$7.50 ticket and \$4 gets a \$5 ticket. Aeros play San Diego, Feb. 18; Phoenix, March 1, and St. Paul, March 8.

ABC Interstate Theaters - \$1.50 admission tickets.

Dean Goss Dinner Theater - Comedy production, *The Babysitter*, \$16/couple. Tickets available every night except Monday, Saturday.

Disney Magic Kingdom Club - Free membership cards. Also available is Disneyland passport, good any day through May, which allows unlimited use of all Disneyland attractions. Adults, \$7.50; juniors, \$7; children, \$6.

Sea-Arama Marineworld - Tickets on sale, \$3.75 for adults, \$2.50 for children. Open until dusk year-round.

Marietta's Dinner Theater - Royal Coach Inn, Southwest Freeway. Tickets \$8/person good Tues/Weds/Thurs/Sun. Call Ms. Royal, 621-5957, tell her you're from JSC. Get ticket and pay at theater on night of play.

Astroworld - Reopens weekends March 12. Tickets available March 7 at \$6.95 for adults and children. That's a \$1 discount.

PLANT SWAP ANYONE?

Get on the Plant Swap mailing list. Send your name, mail code, extension and special interest (if any) to SD52/Plant Swap.



DEFENSIVE DRIVING

Registration will be held March 14-15 in the Gilruth Recreation Center lobby for the next EAA-sponsored defensive driving courses.

Each course runs two nights, four hours a night from 6-10 p.m. and costs \$10/person. Courses will be taught March 21-22 and March 23-24.

HOUSTON RODEO

A few tickets for each performance are still available at the Bldg. 11 Exchange Store.

All tickets are \$5.50 each. Headlining performers and dates are: Mac Davis, Feb. 26; Mel Tillis, March 1; the Osmonds, March 5; and Charlie Pride, March 6 (matinee).

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9				10			
11			12				
			13				
14	15	16			17	18	19
20				21			
22				23			

JSC Crossword

(See answers page 2)

ACROSS

- Pow
- Radar search
- Smear
- Author Victor _____
- Measures height
- To drain
- ASTP cosmic particle experiment containers
- Spacelab prime contractor
- Precipitation
- Ball club
- ___mite or ___mometer

DOWN

- Bachelor of Business Administration
- Everything
- Seed
- Flew on Gemini 3
- Lunar golfer
- Lacerate
- Ice ___ or Stone ___
- Neither
- Floor covering
- Wager
- Anger
- Fuegan Indian
- W. Indian key (island)
- Relatives
- Nahoor sheep

Roundup Swap Shop

CARS & TRUCKS

- 69 Chevy. 6 cyl. \$300 firm cash. Burt, 333-2117.
- 74 VW 7-pass bus. Very good cond. \$3,750. Currie, X-3921 or 585-8676.
- 71 Chevy pickup. 350, V8, auto, air, pwr. Good tires, good cond, pass door damaged. \$795 as is. Peacock, X-2208 or 332-2292.
- 73 Toyota Corolla. 4 dr, 4 spd, air. \$1,495. Wilson, X-3803 or 488-7169 after 5.
- 76 Toyota Corolla. 2 dr coupe, auto, air AM/FM stereo, xint cond. 488-2716.
- 76 Chevy 1/2 ton pickup. Fleetside Custom Deluxe. LWB, PS, 6, std, AM, new (700 mi). York, X-3921 or 734-0506.
- 70 VW bus. New eng, very good cond, under blue book. Monford, X-3404 or 945-7893.
- 74 Mazda 808 sta wgn. 4 cyl piston, 25-30 mpg, air, AM/FM, 4 spd. Hutchins, X-5831 or 482-5607.
- 71 Pontiac Catalina sta wgn. Pwr, air, 400 cid. Donahoo, X-5276 or 925-2139 evngs.
- 67 Ford 1/2 ton pickup. 3 spd w/overdr. 352, V8, air, hvy susp. Donahoo, X-5276 or 925-2139 evngs.

CYCLES

- 73 Honda 500 Four. All safety features, 1 owner, low miles, helmet, rain suit, xint cond. \$1,000. Kendall, X-6208 or 529-8662.
- 72 Honda SL100. 5900 mi, adult owner, xint cond, 2 helmets. \$250. 944-4153.
- 10 spd bike. Good cond. \$30. Mangieri, X-5107 or 488-5471.

Swap Shop advertising is open to JSC federal and on-site contractor employees. Goods or services must be offered as advertised, without regard to race, religion, sex or national origin. Non-commercial personal ads should be 20 words or less, and include home telephone number. Typed or scribbled ad copy must be received by AP3/Roundup by Thursday of the week prior to publication.

BOATS

- 24 ft Herreshoff Eagle sailboat. Fiberglass, teak cabinet work & wheel, w/Seagull OB, boom tent, docklines, anchor, etc. Bricker, 471-2999.
- Aluminum pontoon bicycle-type paddle boat. \$35. 334-1292.
- Sailboat, 14 ft Starfish. On new trlr. \$500. Eggleston, 334-2897.

PETS

- Border Collie pups. 2 males, 7 wks old, ready to go. Rainey, X-7272 or 474-2988.
- Want good home for 2 very lovable Siamese cats. Roberta, X-4551 or 945-7066 after 6.
- AKC reg cocker Spaniel, purebred, buff color, 2 yrs old. Xint configuration, affectionate w/children. \$150. 333-3810.

PROPERTY & RENTALS

- Half acre city lot near Alvin Junior HS. \$9,000. Currie, X-3921 or 585-8676.
- For rent: Lake Livingston, Cape Royale, compl furn home, 3-2-1. Fishing, hunting, tennis, golf, etc. Reserve early. Wk/mo/yr rates. 488-4487.
- Galveston West End. 2 bdrm By-the-Sea Condo apt, full furn. \$180/wk off season, \$260/wk in season. Clements, 474-2622.

- Waterfront lot on Demi-John Island near Freeport on Bastrop Bayou. Unpolluted waters, bulkheaded, 4 mi to intra-coastal canal, clubhouse w/swimpool avail. 682-7435 after 6.
- Wooded waterfront lot at Pt. Lookout on Lake Livingston. 75X137, utils, restrictions. \$3,500. 946-7587.
- Patio lot at 7 Coves on Lake Conroe. Investment buy, low equity. Parker, X-4241 or 481-4372 after 5:30.

MUSICAL INSTRUMENTS

- Gulbransen spinet organ. \$295. Richeson, X-4576 or 488-8761.
- Normandy Clarinet by Le Blanc. Used 14 mos, school approved. \$150. 474-2906 after 5.

STEREOS & CAMERAS

- Martel Fax-150 AM/FM MPX stereo rcvr w/2 bkshef spkrs & Koss stereo hdset control panel. \$65. Mangieri, X-5107 or 488-5471.
- Old Akai reel-type stereo tape recorder. Works but could use tuneup. \$30. 334-1292.
- 2 Acoustic Research-17 spkrs. \$80/pr. Lake, X-5271 or 523-2137.
- Rollei Auto Electronic Flash Model 140 RES. Like new. \$90. Dewey, X-2815 or 453-3697.
- Konica Auto Hexanon lenses. 35mm f2.8, \$90. 135mm f3.2, \$60. Both like new. Pruett, X-4491 or 487-4914 after 5.

HOUSEHOLD ARTICLES

- Bar refrigerator. 115 volt, abt 2 cu ft on rollaway stand. Like new, ideal for camper or college. \$100. 472-6002.
- Double bedstead & dresser. No boxspgs or mattress. \$40 cash. Burt, 333-2117.
- Reg size Hollywood bed. \$75. Zill, X-2457.
- Black & Decker nylon line grass trimmer. \$15. Richeson, X-4576 or 488-8761.
- Cab-height camper shell for LWB w/walk-in door. Insulated, sliding windows. \$80. Donahoo, X-5276 or 925-2139.
- .22 cal Marlin Glenfield bolt-action rifle, 8 shot clip, w/scope, \$30. Akromaster control line model airplane w/ Fox .19 eng, never flown, \$30. Mangieri, X-5107 or 488-5471.
- Amateur (Ham) receiver. Heath SB303, mint cond. \$275. Eggleston, 334-2897.
- Porta-Potti. Never used, compl w/chems & mounting braces. \$95. Sterling, X-4977 or 488-1380 after 5.
- Four G78-14 Goodyear Steel Belted Radial tires. Used 8000 mi. 682-7435 after 6.
- Bacliff Bass Club accepting members. 559-2486 or 559-2756.
- Square dance lessons, Friendswood. 482-3925 or 482-7019.
- Clogging lessons for square dancers.

MISCELLANEOUS

- 482-7019 or 334-5201.
- Dayton split phase AC motor, 1/2 HP, 115V, 1725RPM, \$30. Sliding door track 8 ft (16 ft hardware) guides & hangers, \$50. 944-7249 after 5:30.
- Archer soldering gun, 2 heat positions. \$7.50. Gorman, X-4576.
- 18K gold ruby, diamond & turquoise dinner ring. Mary, X-5153.

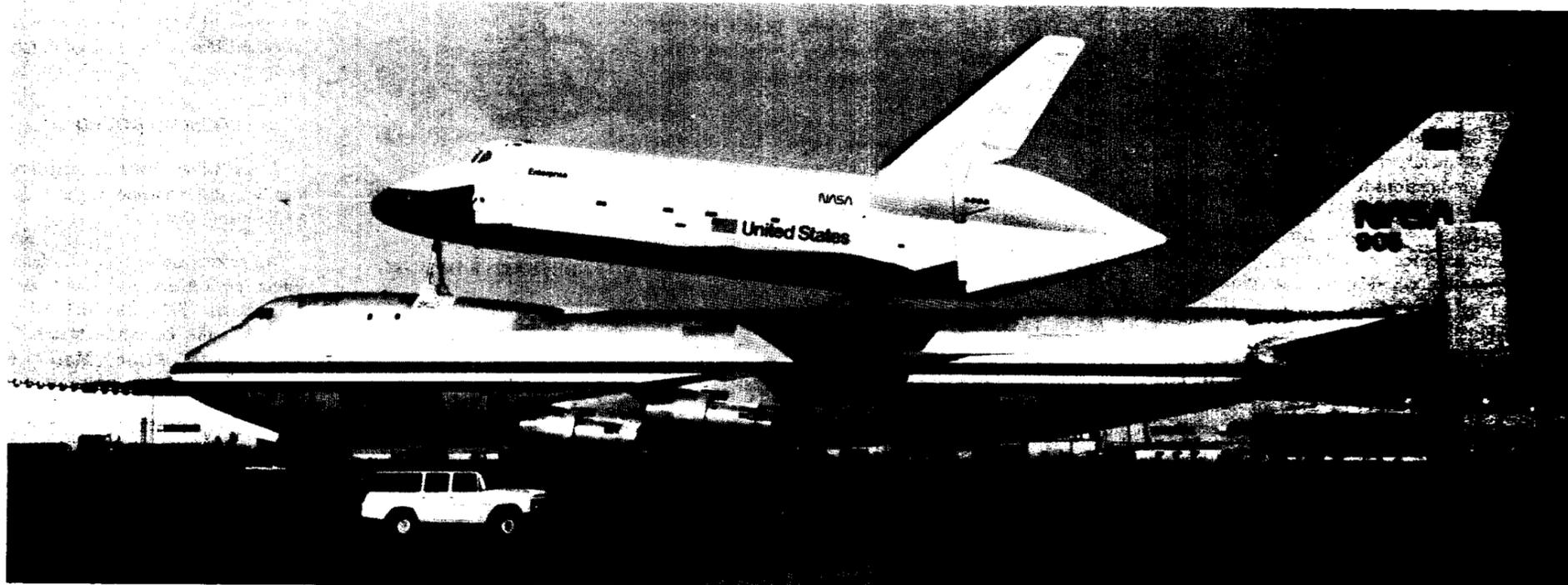
WANTED

- Umpires needed (15 yrs & up) for kids baseball, softball, T-ball & slow-pitch. 474-2988 or 488-3687 evngs.
- Want conscientious roommate to share 1 bdrm lakefront apt. Bob, X-5841.
- 2 whl utility trailer. Must be cheap & bargain. Chandler, X-5738 or 488-4395.
- Need riders for carpool from W Loop, SW Fwy, Bellaire area. 8-4:30. McLaughlin, X-3771 or 661-2974.
- Want Model C IBM or Olympia electric typewriter, std size carriage. Forbes, X-3751 or 488-4238.
- Want House in CLC, 3-2-2, panel den w/fireplace, 1700-1850 sq ft. Townsend, X-3274 or 488-2656.
- Firefighters needed. Men & women adult residents of CLC to join CLC Volunteer Fire Dept. You will be trained & equipped. 488-0023 anytime.

LATE ENTRIES

- Yamaha 100 motorcycle. Under 500 mi. \$300 or best offer. Marks, 734-4058.
- Disposing quality mint stamp collections at under half catalog value. \$1,700 worldwide and \$1,200 U.S. Xint investment. Jeff, X-6355 or 482-5393.
- 75 Datsun 280Z. Metallic blue, 4 spd stick, fuel inj, air, AM/FM, mag whls. \$5,500. 487-2637 after 5.

Orbiter 101: Flagship of the Shuttle era



This is the configuration for today's captive flight

Photo by Gene Edmonds



Mated vehicles sit in hangar prior to taxi tests



Overland move took Orbiter through public streets



Boys and dog, right, get seats with a view



Enterprise heads into Edwards AFB near San Gabriel Mts. Photo by Pat Patnesky