

VOL. 16 NO. 19

NASA LYNDON B. JOHNSON SPACE CENTER

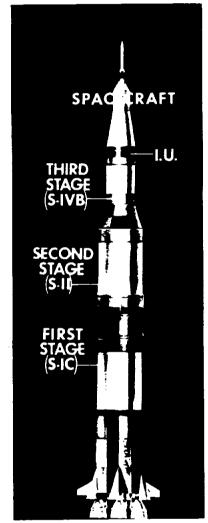
HOUSTON, TEXAS

Friday, September 16, 1977

First stage Saturn **Y** arrives soon at JSC

Sept. 19.

the first in a series of authenic hard-



Saturn launch vehicle

The first stage of the Saturn V, ware to be brought to the Center ing 14 parking lot and later trans-

> Eventually, an entire park facilities and Little Joe and Redstone displays will be included.

> The first exhibit, which will Saturn V assembly that was actually used as the backup hardware for the Apollo missions.

> The S-IC will leave the Michoud Assembly Facility outside of New Orleans Sept. 16. It will be placed on a barge and transported through what is known as the Intercoastal Waterways.

> Intercoastal Waterways are a series of canals and deep water close inland, dredged parallel to the coast. Together they constitute a protected waterway; that is, protected as opposed to the Gulf or the ocean which would be considerably more hazardous for this type of operation. Depths and diameters within the Intercoastal Waterways are carefully controlled.

> David B. Homer will be the Transportation Team Leader once the barge arrives at the JSC dock. He says the S-IC will come to the Center complete with nozzles and will have no shroud or covering to hamper photographers.

ALSEP control center to be dismantled

Most of the other stages will arthe S-IC, will arrive by barge at JSC for display at the back of the Build- rive much later from the Kennedy Space Center: the S-II, the S-IVB, The arrival of the S-IC will mark ferred to an adjacent display area. the Spacecraft Lunar Adapter (better known as the SLA), and the (Rocket Park) and exhibits area are Lunar Escape System (LES). The planned for that location. Picnic Instrument Unit will emanate from the Marshall Space Flight Center, and the Command Service Module (CSM) will originate at Downey, arrive only in stages due to its tre- Calif. The Command Service mendous size, will be the entire Module (CSM) will originate at Downey, Calif.



S-IC, nozzles removed

The S-IC being loaded onto barge. Both Voyagers are alive

How's the Voyager doing?

"Better than I am!" quipped the voice on the other end of the line.

It seems that officials at the Jet Propulsion Laboratory (JPL) have been swamped with the standard question about the Voyager spacecraft at such odd hours as 2:15 in the morning, and, fortunately, experts there have nothing but good news to report.

The launch of Voyager 1 Labor Day was "beautiful" according to a spokesman at JPL. The spacecraft is performing perfectly; all the booms are locked in place, and the craft is presently in a cruise mode.

The launch delay of Voyager 1 was said to be directly related to

problems that occurred with the launch of Voyager 2 last month. Extra springs were added to the booms, and potential computer problems in both vehicles were solved by some reprogramming, which consisted mainly of slight changes in the algorithms.

Right now, the Voyager 1 spacecraft is taking measurements of the solar wind and the interplanetary medium.

Continual computer printouts allow experts on the ground to know at any point in time how many miles from Earth or Jupiter Voyager is, how far it has traveled since launch, and its velocity relative to Earth, to Jupiter, and to the

Second free flight tests aerodynamic capabilities

be dismantled. here on Earth.

on Earth have been receiving a left there by Apollo explorers.

The five operating stations, one each for Apollo missions 12, 14, 15, 16, and 17, have been nothing short of tenacious. Specifications called only for a one-year operating lifetime for the first four ALSEP's and a two-year lifetime for the Apollo 17 station.

The Apollo 12 ALSEP is now well into its eighth year and the in its fifth year. Over 153,000 commands have been transmitted from Earth for execution by the Moon

Surface Experiments Package cumulated operating time for all enriched. (ALSEP) control center at JSC will ALSEP stations exceeds 29 years.

The Apollo lunar science sta- vide long-term lunar surface geo- the Moon will continue to serve as a tions are being shut down because physical and electrical data. Surface reference point in astronomy. of dwindling power reserves at the experiments included measuring stations and budgetary limitations heat produced by the interior of will continue to use the signals the Moon, measuring the types and from the transmitters to assist them Since July 20, 1969, scientists quantities of charged particles in in deep space work, including geothe Moon's ion atmosphere, meas- detic and astrometric studies and steady stream of information about uring the magnetic environment, spacecraft navigation. Also, the mothe Moon from the five ALSEP's and measuring and providing seis- tion of the lunar orbit will be accumic data on moonquakes and mete- rately monitored against a backoroid impacts.

Considerable knowledge about gravitational theories. the Moon has been gleaned in the past eight years. It is now believed that the Moon crust is multilayered and from 60 to 100 kilometers (3.6 to 6 miles) thick with a second boundary at an approximate 20kilometer (1.2-mile) depth.

The upper mantle has been de-Apollo 17 ALSEP is still operating termined to be fairly homogeneous and to extend to approximately 500 kilometers (30 miles). It is thought to be composed of olivine from one of the ALSEP's.

On Sept. 30, against a backdrop stations, and more than one trillion or olivine-pyroxene matter, alof a waning Moon, science instru- pieces of lunar science and engi- though other compositions have ments on the lunar surface will be neering data have been received been proposed. Seismic data inditurned off, and the Apollo Lunar from them on Earth. The total ac- cate the Moon may be iron-

> Even though experiments will be The stations were built to pro-terminated, the transmitters left on

> > The Jet Propulsion Laboratory ground of extragalactic stars to test



CHART RECORDER Keeley (Bendix) reviews engineering data

very similar to the initial Aug. 12 Orbiter and the X-15. flight – and every bit as smooth!

Tuesday's flight was intended to show how sensitive the Orbiter would be during specific maneuvers. To accomplish this task, astronauts Joe Engle and Richard Truly, who spent about equal time at the Enterprise controls, initiated program test inputs on the computer keyboard and made aerodynamic stick inputs to test flight control and handling characteristics.

During the press conference at the Dryden Flight Research Center, which was attended by more than a

The second free flight of the hundred newsmen, Engle was asked Orbiter Enterprise Sept. 13 was to compare the handling of the

> Engle said the Shuttle was more massive and, therefore, not as quick as a smaller aircraft, but very solid.

> Lakebed runway 15 was used for this flight instead of the preferred runway 17 because of previous rains at Edwards, which had caused the flight date to be postponed.

> Astronauts Fred Haise and C. Gordon Fullerton are scheduled to pilot the Enterprise during the third free flight in about two or three

> > (Continued on page 4)



SEPARATION - Orbiter shown moments after separating from the 747.





PILAND (35) DECORTE (35)





SMITHWICK (35) HOOPER (35)







STOKES (30) SHROPSHIRE (30) ROMERO (30)



LEE (30)











ALLEN (30)

LONG-TIME EMPLOYEES HONORED — Ceremonies were held Aug. 16 for 39 JSC employees with 25 years or more of government service. Shown above are those employees who received awards for 30 or 35 years of service. Thirty-five year award winners were: Martin L. Raines, Joseph V. Piland, Joseph P. DeCorte, George A. Post, Oral R. Smithwick,

Martin L. Hooper, and Stanley J. Buinski. Thirty-year award winners were: Sammie Wilkins, Katherine Stokes, Edwin Shropshire, Carl Romero, Lewis Lee, Roy Field, Jackson Craven Jr., Arthur Booth Jr., Richard Andrews, and Preston Allen. Not pictured are John W. Eggleston and William W.

The shoe is on the other foot

know, like a good wife," laughed Dr. William Fisher. "It felt kind of odd," he joked, "everyone was huddled around my wife and no one seemed to know what I was doing there ..."

Fisher and his wife, astronaut applicant Anna Sims, are newlyweds who spent what was supposed to be their honeymoon at JSC the week of Aug. 29.

They had applied separately the last week astronaut applications were being accepted. Anna Sims received a call to be interviewed. So far, Fisher hasn't.

Fisher says he always wanted to be involved in the space program but figured that there wouldn't be anything "really going" in his lifetime that would allow him to contribute to it.

Then along came recruitment for mission specialists aboard the Space Shuttle. "If we were ever to have the chance, I suddenly realized this was the time," he said.

"My wife and I both work in emergency medical facilities. We deal with trauma and shock constantly. You can't afford to be hasty, to get tired, or to bypass that one extra test that might save a per-

coffee for the reporters – you of experience in the Shuttle Program – especially on long-duration combine the trip with sightseeing. missions."

> outside of his immediate job is population biology, and they are both excited about the potential of medical experimentation in space. However, the Fishers are equally interested in being a husband-wife emergency medical team on Shuttle

> Asked whether it bothered him that Anna might be selected instead of him, he replied, "It doesn't really matter which of us gets the chance or if neither of us do. The important thing is that we are among the generation that had the first crack at it. Even to be interviewed would be an honor.

> "For myself, I'm very satisfied with the job I have. It's very rewarding work. To go on the Space Shuttle – well, that would be one extra bonus in my life. I really hope Anna makes it."

> Richard Wiley is a policeman in Tiberon, California – a small town outside of Sausalito, near San Francisco.

"I was standing there making need for people who had that kind tion, he decided to come along "to give her moral support" and to

> When asked how he would feel Fisher's professional interest about his wife being up in space, he answered, "Thrilled; just thrilled."

> > "We've always liked active sports," he said. "Hang gliding, things like that. I wish I could go up there, but I really don't have the right qualifications."

> > And Wiley thinks his wife will make it to space, too. He confided that he has great confidence in Millie's abilities. "She has never failed at anything she really set her mind to do, and she's always willing to give a hundred and one percent!"

> > Wiley admitted he won't be overly excited about leaving the clear skies and invigorating atmosphere of northern California, even if the drought there has brought about enforced severe cutbacks in allowable water consumption.

> > "But if Millie got the chance to be an astronaut, I'd pack in a minute." He is already investigating opportunities with the Houston police department.

"After all," says Wiley, "one When he found out that his wife, thing you don't have to worry

Millie, had been asked to interview about in Houston is a shortage of son's life. I figured there would be a at JSC in response to her applica- water."

OUTSTANDING SUMMER AID AWARDS - Left to right, the young people selected to receive this award are: (first row) Dianne Mitchell, Sheryl Kossa, Cynthia Armstead, Patricia Quinney, Patricia Cardenas, Phyllis Samuels, Stella

Gutierrez, Carolyn Davis, Beatriz Ulloa: (second row) Theresa Turner, Stafford Jones, Ana Almaguer, Little Baines, Tina Chaney, David McMillion, Willie Richardson, Carla Ellison, and Renee Lewis.

Ann Sullivan chosen Secretary of Month

Ann Sullivan "richly deserves control, office procedures, and as-Life Sciences.

Mrs. Sullivan serves as private secretary to Johnston and is described as "an inspiration to others" because of her congenial attitude, her knowledge of new and innovative procedures, and her participation in numerous programs for self-improvement.

During the past year, Mrs. Sullivan applied outstanding skills during several organizational changes which ultimately lead to the formation of a new directorate. Early in this period, she simultaneously served the secretarial needs of three acting directors with diplomacy, poise, and tact, never failing to satisfy everyone's requirements.

Mrs. Sullivan implemented new systems for filing, correspondence

the recognition that comes with sisting other secretaries. She is highbeing selected as a JSC outstanding ly respected by her associates and secretary," according to Richard S. all levels of management. In Johnston, Director of Space and Johnston's words, she has "the mark of a professional" in her field.



Ann Sullivan



ALFORD RECEIVES 40-YEAR EMBLEM - Roy A. Alford received a certificate and a 40-year service emblem from Dr. Christopher Kraft in a ceremony Aug. 26. Alford began his Federal service in 1930 in the U.S. Army and was working in the Public Affairs Office at the time of his retirement. Robert A. Frosch, NASA Administrator, congratulated Alford in a letter.

Torres is selected top September co-op

engineer who was familiar with two electronics laboratory. noncompatible computer systems only one term.

Torres has been assigned to the IBM 360/45 computer to an SEL with others.

It would normally take a senior 3200 minicomputer in the EG4

The task was broken down into three or four months to do the job four phases, and it was anticipated that Peter Torres, top Co-op for that Torres would complete one this month, has accomplished in phase of the task each co-op period. Torres, however, is on the third phase in his first co-op period.

Torres' work has been marked EG4/Data Systems Branch under by a quick grasp of techniques and Robert D. Vaughan and was operations, a minimum of direction charged with the task of converting and supervision, enthusiasm for the a wire wrapping program from an job, and the ability to work well

Margaret Thatcher visits JSC

Margaret Thatcher, leader of the Opposition (Conservative) Party in JSC at 9:30 and toured the Space Great Britain, visited JSC Saturday, Shuttle simulators and mockup, the Sept. 10.

Mrs. Thatcher was accompanied exhibits and artifacts. by her husband, Denis Thatcher, Thatcher.

The Thatcher party arrived at Mission Control Center, and viewed

The event was attended by sevand Adam Butler, M.P., Parliamen- eral representatives from the press tary Private Secretary to Mrs. and by Mr. and Mrs. Roy Fox, Consul General, Houston.

EAA ATTRACTIONS

TICKETS

The following tickets are availafrom 10 a.m -2 p.m. Monday -Friday.

Astroworld - Adult & children tickets available for \$5.95 each. That's a \$2 dis-

Dean Goss Dinner Theater -Comedy production, Not with My Daughter. Tickets \$16/couple available for any night except Monday, Saturday through Sept. 25.

Beginning Sept. 27, the comedy production, Right Bed, Wrong Husband, will be presented.

Disney Magic Kingdom Club -Free membership cards.

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

Six Flags - Adult & children tickets \$6.75 each. That's a \$1.20 discount.

NAUTILUS DISCOUNTS

NASA employees and associate contractor personnel are reminded that Oct. 1 is the deadline to take advantage of Nautilus Discount Center special rates. Individual, husband-wife, and family memberships are available. For more information, contact Tom Gold or Drew Weiss at the Clear Lake facility, 333-4848, or Ray Waldvogel at the tickets to scheduled events, you Hyatt Regency facility, 641-1520. Don't delay; join today! Your membership entitles you to use any of the nine Nautilus locations.

DEFENSIVE DRIVING

The EAA will be offering its ble at the Bldg. 11 Exchange Store next defensive driving course Sept. 26-29 from 6-10 p.m. at the Gilruth Recreation Center.

> Registration is scheduled for Sept. 19-20 from 10:30 a.m. to 1:30 p.m. in the center lobby.

STOP SMOKING COURSE

A stop-smoking course is scheduled for Nov. 7-11. The exact charge for the course has not yet been determined.

However, due to the volume of the telephone calls on the subject, interested parties are urged to dial

A recorder will take your name and extension, and someone will call you as soon as possible. Those who have participated in the course before and have started smoking again may retake the course at no

CLARIFICATION

If you want to reserve a field for an athletic event, find out if a game has been rained out or postponed, schedule an athletic event, obtain class is Oct. 20, and classes start Oct. 27. information about schedules in the gym, and so forth, Tim Kincaid is the person to call at X-3594. He also handles tennis reservations.

However, if you want to buy must get them through the Exchange Store in Building 11 between 10 a.m. and 2 p.m.



CARRIER AIRCRAFT TEAM RECEIVES AWARD - Pictured are Ivy F. Hooks. Special Assistant on the Director's staff; Dr. Sigurd A. Sjoberg, Deputy Director; and Shuttle Carrier Aircraft Team representatives Robert P. Burt, Carl B. Peterson, and Joseph S. Algranti.

Gilruth Recreation Facility still has classes available

in extreme situations. For additional in-

AUTO MECHANICS

Sign-up deadline for the intermediate

The class will meet Thursday nights

from 7:15-9:15 in room 204, and the lab

will meet Oct. 29, Nov. 5 and 12. Fee is

OIL PAINTING

from 6-8 p.m. in room 215. Fee is

Sign-up deadline for the next class is

\$33,50 per person plus parts for labs.

Oct. 27, and class will begin Nov. 3.

\$37.50 per person plus materials.

formation, call X-3594.

PLANT PROPAGATION Sign-up deadline for this course is

Here is a reminder about the sign-up Oct. 13, and classes will commence deadlines for fall classes at the Gilruth Recreation Center. Payment must ac-The class will meet Thursday nights company sign-up and is refundable only

from 7:30-9:30 in room 214. Fee is \$14.50 per person.

GROUP TENNIS LESSONS

Sign-up deadline is Oct. 4; and classes will start Oct. 11.

Classes will meet Tuesday and Thursday nights from 7:30-8:30 for beginners and from 8:45-9:45 for intermediates. Fee is \$30 per person.

LANGUAGES

Sign-up deadline for all language classes is Sept. 19. Call X-3594 for meeting times on the various courses.

NOTE: The Recreation Center will be The class will meet Thursday nights closed Saturday, Sept. 24 to those not participating in the Lockheed Electronics Company picnic.

Sjoberg presents award

On Aug. 25, 1977, Dr. Sigurd A. Sjoberg presented a JSC Group Achievement Award to the Shuttle Carrier Aircraft Team in recognition of their outstanding achievements in supporting the Shuttle Carrier Aircraft Project.

In nominating the team for the award, Robert F. Thompson, Manager of the Space Shuttle Program, stated that the early delivery of the Boeing 747 Shuttle carrier aircraft with an associated cost underrun was very important to the Shuttle

During the test flights to date the Shuttle carrier aircraft has met or exceeded every performance goal established for the test program.

Indian tribes to visit JSC

Two Indian tribes from the Couchatta Indian Reservation will be visiting JSC Sept. 14.

The group of 100 to 150 adults and schoolchildren will be welcomed in the Building 30 auditorium by astronaut Vance Brand, who will tell them about the various educational opportunities here at the Center.

The Indians will visit the exhibits hall in Building 2, the flight simulators in Building 5, and most of the regular tour areas. They will leave the Center at 4 p.m.

Roundlesswaperos

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,

CARS & TRUCKS

73 Vega. XInt cond, good tires, A/C, clean Inside. \$600. Great work or school car. Martindale, X-4193 or 437-4030.

71 Dodge Dart. Good running cond, 72 K miles. Not a cream puff, but a challenge to an expert baker. \$975. Rubenstein, X-5461 or 334-2354. 73 Cutless Supreme. Auto, 2-dr, A/C,

AM-FM stereo, radials, new battery, xint cond. \$2,500. Daniel, X-4632 or 482-5004.

76 Ford Torino wgn. Auto, A/C, radio, pwr, 351 V-8, new radials. \$3,800. Anderson, X-3566 or 487-4249.

72 Pinto. Auto, 2-dr, A/C, needs paint. 944-8740 after 4 p.m. 60 MGA Classic Rdstr. XInt cond.

X-6321 or 944-4957. 75 VW Transport van. Std trans.

\$4,400. 331-5667 after 6 p.m. 69 Riviera. XInt cond, 80K miles, Michelins. \$1,200. Blucker, X-3533 or

mileage, very good cond. \$1,695. 474-2622.

71 Bulck Electra 225. All pwr, A/C, AM-FM, fine cond. \$1,200. Crum, X-3083 or 334-1953.

74 Vega Hatchback. A/C, AM-FM, gages, good cond, 42K miles. \$1,200. White, X-4405 or 486-1860.

71 Olds 98. All pwr, A/C, vinyl top, original owner, 65K miles, good cond. Winkler, X-3343 or 482-4874 after 5

72 Mercury Cougar. A/C, pwr, 351 V-8. \$1,800. X-3907 or 334-4197.

69 Mercedes 250. All pwr, AM-FM, new tires, well-kept. \$3,400. Allgeier,

64 Rambler Classic. New tires, starter, coil. \$300. 334-2180.

75 Flat Sports Spider convertible. Blue, 5-speed, AM-FM. \$3,100. Wilson, X-3254 or 488-4139.

69 Dodge Charger. V-8, 4 BL, auto A/C. pwr. I owner, xint cond. \$1,200. Pruett, X-4491 or 487-4914 after 5 p.m. 76 Subaru. 6 mos. old, 4-dr, 4-speed, 7K miles. Gets 35 mpg. \$2,800. Moore,

X-2171 or 482-1724.

PROPERTY & RENTALS

Coves on Lake Conroe. Investment buy, 473-6079 after 6 p.m.

and include home telephone number. Typed or scribbled ad copy must be received by AP3/Roundup by Wednesday of the week prior to publication. low equity. Parker, X-4241 or 481-4372

Lot for sale. On Lake Sommerville (Birch Creek Forest), wooded, by fishing lake, boating access to Sommerville, rec facilities. Also wooded 1-acre lot at Beaver Creek on undeveloped property 9 miles from Lake Sommerville. Schmidt, X-4063 or 333-4379.

Rent. Lake Livingston, Cape Royale, compl furn home, 3-2-1. Fishing, hunting, tennis, golf, etc. Reserve early. Wk/mo/yr rates. 488-4487.

Vacation retreat for rent at Cape Royale on Lake Livingston. Tennis, pool, boat launch, golf. 3-day min.

Galveston West End. 2-BR By-the-Sea ondo apt, full furn. \$180/wk off sea-70 Kaiser Jeep. Auto, new tires, low son, \$260/wk in season. Clements,

Rent. Reserve for summer vacation now. Jamaica Beach, Galveston. New 2-story. \$175/wk. 334-1640 after 5 p.m. Main canal lot. Downey Caney Creek, Matagorda Bay. \$3,000. Wilson, X-3254

PETS

or 488-4139.

Gelding. Sorrel & white; 16-hand; trained for English, games, pleasure, etc. \$550, 334-3202 after 5 p.m.

Two female Siberian Husky pups. Masked faces, champion bloodlines, pedigrees, shots & papers \$150. 946-4752.

Male German Shepherd. Give to good home, 10-mo old. Apt changed pet policy; cannot keep. Kincaid, 486-0814.

CYCLES

Honda 350-four. Beautiful ladies' bike, super-clean fairing luggage rack, 6K miles. \$750. Grow, 479-4249.

71 CT-70 Honda. Beautiful cond. \$225. 334-3202 after 5 p.m.

76 Harley Superglide FXE, 4200 miles, blue w/matching helmet. \$2,495. Weaver, X-3159 or 473-6079 after 6

76 Honda CB 550 Supersport. Blue w/white fairing and sissy bar, 2300 Land for sale. Patio lot at Seven miles. \$995. Weaver, X-3159 or

WANTED

6-cyl pickup w/ A/C. \$700 or less.

Young, X-5031. Two responsible hunters to join in quall/dove lease. Three hours drive from CLC. 735 acres, 4 tanks, 2 creeks. Flagg.

333-3810. Nursery attendant needed for Sunday morning service at First Christian Church in Pasadena. Louise Rehders, 477-8368. Car pool from North Loop, I-45 at

610. Northline, Northwest Mail area. Join or form. Sharon, X-4941 (8-4:30) or 869-8901.

Used boys bike, 20". 488-0266. Carpool from Texas City. Join or form. Young, X-4949 (8-4:30) or

948-3804. Need riders for carpool from SW fwy, Bellair area. 8-4:30. McLaughlin, X-5536 or 661-2974.

Firefighters needed! Men & women adult residents of CLC to join CLC Volunteer Fire Dept. Rewarding community equipped. Call 488-0023 any time.

Velvet (or similar quality) drapes 8' wide x 10'. Also reel-to-reel tape record-, xint cond. Carol, X-2781 or 681-5369.

Ride from Dever Harbor area to JSC. Mary, 673-2802.

CAMERAS

Sankyo Super-8 movie camera. Model MF 606, macro-focus, F1.8, 6X zoom Never used. \$100. Lineberry, X-4347 or 623-6668.

Camera for sale: Konica 35 mm f2.8, Auto Hexanon wide angle lens for Auto reflex T or TC cameras. \$60. Patterson 8 10 print washer, new. \$25. Pruett. X-4491 or 487-4914 after 5 p.m.

MUSICAL INSTRUMENTS

Clarinet. Evette & Schaeffer, 2 yrs old, like new, Cost \$400, will sell \$195. Bernhard, 488-0549 or X-4461.

Trombone. King Tempo, good beginner instrument. \$100. Miller, X-4507 or 471-4390.

BOATS & PLANES

Lido-14 sailboats, Information on 6 Lido sailboats for sale by owners. Priced from \$1,275 to \$2,150. Hoover, X-2738 or 334-2392.

74 Cessna 172 plus instrument. Instruction \$34/hr wet. Call 471-4627 or

Aircraft for sale: King KX-160. Nav/ com unused since recertified on all channels. Nav head not included. \$400. Pruett, X-4491 or 487-4914 after 5 p.m.

MISCELLANEOUS

Westinghouse washer & electric dryer. Apt size, can be stacked. \$70 for both.

Foreign language records. Three sets, Spanish, Italian, Russian. Each set \$10. Sheptock, X-3281 or 938-7019.

Frost-free Whirlpool refrigerator/ freezer. 13-cu ft refrig, 3 cu ft freez, xInt cond. \$75. Samouce, 482-0702.

Lockout hubs for Scout or Jeep. \$10. Samouce, 482-0702.

Regulated DC power supply. 140 vdc @ 5a, 7.5 vdc @ 20a, 6 vdc, 24 vdc, 48 vdc. Call for specs. \$60. Samouce, 482-0702

Swing set. Free BUT you must disassemble & cart away. Patterson, X-3083 or 488-0813.

Pool table. Good cond, 4 sticks, 1

pro, 1 bridge, rack, 2 sets balls. \$100.

Magnavox console record player. \$15. Patterson. X-3083 or 488-0813.

Tent. Coleman Forest Home 10' x 16', sleeps 6 (8' x 8' closed-in room; 8' x 8' screened porch), xint cond. \$130. or 1-554-6601.

Rug. 10' x 15' Fiesta red w/pad & 2' 11' runner rug w/pad. Xint cond. \$125. 1-554-6601. Heavy white oak bourbon barrels.

One whole, two halves, sanded, bleached, 488-5037. Champion Motorhome, 1972. Good

cond, 25', low mileage. \$9,500. Benson, X-5056 or 339-2180 after 5 p.m. Two camping cots w/2" tress. \$10 each. Thiel. 946-6814.

Canopy, 8' x 10', for slide-mounting on trailer/motorhome. Includes stakes & ropes. \$45. Thiel, 946-6814. New hollow core interior door. 32".

\$5. Bartosh, 333-3690 after 5:30 p.m. & 3 Baylor-SMU football tickets for

Oct. 8. Section H. \$8 each. Smith, 333-2243. Scuba gear. Conshelf XII regulator. \$85. 80-cu ft aluminum tank w/

backpack. \$90. SEIKO dive watch. \$75. Large wet suit. \$45. 482-5607 after 5 German grandfather clock. Cherry an-

tique finish, 84" tall, moving moon dial. Also mahogany 10-gun cabinet. 76 Bicentennial souvenir sheets in

original envelope. \$17.25 for one or \$170 for 10. Sugano, X-3856 or 482-5393

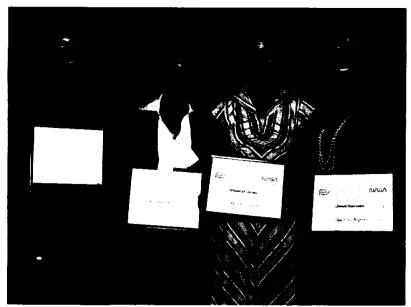
ROUNDUP

NASA LYNDON B. JOHNSON SPACE CENTER

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 JSC employees.

Editor: Beverly Eakman

Photographer: A. "Pat" Patnesky



OFFICE EDUCATION STUDENT AWARDS -- The outstanding Office Education students (left to right) are: Jonetha Davidson, Genice Evans, Shena F. Jones, and Janet Harrison. Not pictured are Eula Jones and Anna Ortiz.

Tennis Club wins

The JSC Tennis Club emerged ment, and Tournament Director victorious in matches played with Frank Newman apologizes for that. the American National Insurance (ANI) Tennis Club Aug. 20.

nament with the Galveston branch of the ANI. JSC won the singles Racket Club Oct. 14-16. matches 20-4 and the doubles 11-1 for an overall victory of 31-5.

Club had 254 members, which is very large for a club of this kind. got to participate in the tourna- X-7204.

Nevertheless, the Tennis Club offers a tremendous opportunity to Twenty-four single and 12 make new friends and to play one's double matches were included in favorite sport. Many tournaments this Annual Traveling Trophy Tour- are scheduled, such as the indoor tournament at the Friendswood

Carolyn Thompson is the person to call if you want to play and are At last count, the JSC Tennis not a member of the Club. She may be reached at X-5987. Or for further information about fees and For that reason, only 24 members such, call Frank Newman at

New regulation instigated to ease JSC traffic woes

The intersection of Avenue E cially during rush hours but extending to all parts of the workday.

this intersection affects the se-NASA Road 1.

As a result, effective September and Second Street has been the 19, 1977, there will be no left turns source of traffic accidents, near ac- from Second Street to Avenue E cidents, and heavy congestion, espe- nor right turns from Avenue E to Second Street permitted at any time. It is expected that these measures will reduce congestion at Ave-A study of this problem has nue E and Second Street, improve shown that the flow of traffic at the traffic flow on NASA Road 1 entering the Center and substanquence of the traffic lights on tially reduce the risk of traffic ac-

Wheelchair ramps/signs appear throughout JSC

to wheelchairs are now able to find cific angles for ease in ascending or parking closer to the orientation descending curbs and stairs in a building and are aided along the wheelchair. visitor trail by the recent addition of ramps at stairs and curbs.

Signs printed in international symbology direct the handicapped visitor to wheelchair parking at the

Employees have been familiar with various concrete ramps located throughout the Center for some time, but only recently has the same effort gone into the construcsouth end of Building 2. Ramps tion of such facilities for visitors.

Theme set for Spacepex-77

"A salute to the Space Shuttle third place awards as well as the this year's theme of the Spacepex Exhibition and dealer bourse, which is sponsored by the JSC Stamp Club.

Spacepex-77 will be held Sept. 24 and 25 in the Arbor Building of the University of Houston at Clear Lake.

Judges will select award winners from over 1200 pages of exhibits in the open competition – the Grand, Reserve Grand, first, second, and

Approach and Landing Tests" is sterling silver JSC Stamp Club Space Philately Award and a number of specialty awards.

The JSC Stamp Club meets on the second and fourth Mondays of the month at 7:30 p.m. in the Gilruth Recreation Center. The first meeting is devoted to trading and talking; a program is presented at the second. Visitors are invited to attend, or contact assistant chairman Lee C. Scamp at X-2267 for further information.

Combined Federal campaign drive set

eral Campaign for 1978 will be agencies if he prefers to make his that figure - \$50.76. from Sept. 12-Oct. 14, 1977, at entire gift to one or two causes.

For the seventh time, all the Federal agencies in the six-county Gulf Coast area have joined together in a once-a-year drive for United Fund – the National Health agencies and the International Services agencies - thus eliminating the old system of having several drives each

The Gulf Coast Combined Fed-contributor a wider selection of capita gift was just \$3.45 short of

The JSC goal for the 1977-78 campaign is \$204,154. Unfortunately, JSC can no longer claim to be leading among the Federal agencies in this effort, having been outdone by the Federal Aviation Administration (FAA) in employee per capita gifts, which amounted to year. This method also gives the \$54.21 last year. The JSC per fortunate.

Bill Kelly, the JSC representative on the Federal Executive Board (which is the body that establishes the goals) says he is confident that employees here will come through with the donations necessary to reach this year's goal, but he hopes that JSC will once again stand out as the leader in generous contributions for the benefit of those less

Cafeteria

WEEK OF SEPT 19 - 23

MONDAY: Cream of Potato Soup; Weiners & Sauerkraut; Stuffed Pork Chops; Baked Chicken; Meat Sauce & Spaghetti (Special); French Beans, Squash, Buttered Beans. Selection of Salads, Sandwiches, & Pies Daily.

TUESDAY: Navy Bean Soup; Beef Stew; Liver w/onions; Shrimp Creole; Smothered Steak (Special); Cabbage, Corn,

WEDNESDAY: Seafood Gumbo; Roast Beef; Baked Perch; Chicken Pan Pie; Salmon Croquette (Special); Mustard Greens, Italian Beans, Sliced Beets.

THURSDAY: Beef & Barley Soup; Beef Tacos: Pork Steak: Diced Ham w/Lima Beans; Stuffed Cabbage (Special); Ranch Beans, Brussel Sprouts, Lima Beans.

FRIDAY: Seafood Gumbo; Fried Shrimp; Devilled Crabs; Ham Steak; Salisbury Steak (Special); Carrots, Green Beans, June Peas,

WEEK OF SEPT 26 - 30

MONDAY: Cream of Chicken; Beef Burgandy over Noodles: Fried Chicken: BBQ Sausage Link; Hamburger Steak (Special); Buttered Corn, Carrots, Green Beans. Selection of Salads, Sandwiches, & Pies Daily.

TUESDAY: Beef Noodle Soup; Baked Meatloaf: Liver w/onions; BBQ Spare Ribs; Turkey & Dressing (Special); Spanish Rice, Broccoli, Buttered Squash.

WEDNESDAY: Seafood Gumbo; Red Fish; Tamales w/chili; 8-oz. T-Bone Steak; Spanish Macaroni (Special): Ranch Beans, Spinach, Beets,

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

FRIDAY: Seafood Gumbo; Broiled Flounder: Fried Shrimp: Baked Ham: Tuna & Noodles (Special); Macroni & Cheese, Turnip Greens, Stewed

Visitors to JSC who are confined have been carefully designed at spe-

(Continued from page 1)

Does a successful flight mean a subsequent flight can be dropped?" asked one reporter.

Donald K. Slayton, Manager of the Approach and Landing Test Program, pointed out that because every flight is planned with different objectives in mind, "a good flight does not allow us to drop a later-flight."



TENSION EASED - Astronauts Truly (left) and Engle enjoy a laugh before the

NASA Tech House is now almost a bargain



Tech House, with its solar panels, looks very conventional.

Would you consider \$45,000 or be removed from the outside, and a \$50,000 expensive for a house pocket-size ultrasonic transmitter these days? Even excluding the developed by NASA is used by a building lot?

Well, maybe it's a little high.

A recent magazine article on the subject indicated that such a cost might seem prohibitive to the prospective home buyer, but that much lower utility costs would make the initial investment pay off in the long run.

But \$50,000 for a 3-bedroom, 1500-square-foot home doesn't strike the average Houston homeowner as particularly unusual anymore, and much less unusual to homeowners in Los Angeles or the Washington, D.C. area.

And when the house is coupled with all the superefficient advantages of NASA's Tech House in Hampton, Va., it might even be considered a bargain!

Take, for example, the burglar alarm system, based on space research and technology. The major portion of the system is implanted beneath the lawn and uses a lowcost version of an electronics package like the one in the lunar seismometer left on the Moon.

0 #

Interior security system

not be removed from their frames.

The hinges were developed at the

Kennedy Space Center for security

dow shutters self-lock and cannot

Outside doors, once closed, can-

returning occupant to turn lights on

before entering the house.

Shutters self-lock.

Then, there is the light-sensitive device that can detect tornadoes 18 miles away. It is a home version of a detector developed from space re search.

Solar energy and other systems reduce fuel consumption by two thirds and cut water usage in half. Energy-saving features include a fireplace that draws its air from outside instead of using already warmed interior air. The fireplace also augments the hot-water supply by heating water that has been piped in through a tubular grate.

Water conservation is based on spacecraft recycling designs. A partial reclamation system filters wastewater from bathroom sinks, bathtubs, and laundry for reuse in toilet flushing.

The Charles William Swain family of four began their residency at Special wire sensors are woven Tech House Aug. 15. They will pay into window screens and laid under a prorated rent during their yearcarpets at strategic locations. Win- long "lease" and all their utility