# Lyndon B. Johnson **Space Center**

September 15, 1978 Houston, Texas

## A 20-Year Record

# 'We Aint Seen Nothin' Yet'

With the accomplishment of a dozen men taking steps on the moon, with an extension of man's intelligence to the surface of Mars and plans to extend the investigation to other planets, with high energy observatories solving mysteries of the universe-NASA celebrates its 20th anniversary next month.

October 1, 1958, was the first official day of the space agency, and six days later Project Mercury, the first project to send a man into orbit, was formally ap-

Since that day we've seen President Kennedy setting a goal to land a man on the Moon in this decade (May 25, 1961). We accomplished that goal. We've read NASA's charter setting our purpose "to maintain U.S. leadership in aeronautics.' We are holding to that goal. We've seen the 1972 decision to develop a space transportation system and we are aiming now for that goal.

"There are a million things, a million basic science and technology advancements that have taken place as a result of the space program," John Young of the Astronaut Office said in a recent phone interview. "We have over 10 million technical documents and 1600 comprehensive scientific programs that are all direct results of the space program," he said.

"And the way I feel about the future is, we aint seen nothin' yet.'

"We have tasted both triumph and tragedy writes Dr. Robert A. Frosch, NASA Administrator, in a special anniversary publication. "And we are beginning to see some directions we may want to go in the years ahead.

"In our 20th year, we are deeply involved in solving the primary problems of our time," Frosch continues. "We are applying our scientific and engineering expertise to improving auto efficiency and one of us can be proud to be a part."



Flight operators celebrate success of Apollo 11 lunar landing mission.

developing advanced auto propulsion

"The Shuttle will lead to an enormous advance in space communications that can change society. Such telecommunications services as electronic mail, medical delivery, and information access await only positive decisions.

"In short, on our 20th anniversary we at NASA can take pride in what we have already accomplished, satisfaction from the knowledge that we are doing useful work on the frontiers of science and technology for the benefit of our people and our country, and exhilaration at the prospects which lie ahead for the continued expansion of human knowledge and the improvement of the condition of mankind on the planet Earth.

'Truly a unique new entity has come to exist in the world, an entity of which each

# Pegasus to Brighten Skies

The Pegasus 1 spacecraft assembly, launched by NASA in 1965; is due to reenter the Earth's atmosphere on or about Sept. 17, according to notification given NASA by the North American Air Defense Command (NORAD).

The predicted dispersion (footprint) of all pieces of surviving hardware of Pegasus 1 is 200 kilometers (125 miles) crossrange and 3,500 km (2,175 mi.) downrange. The orbital band extends 31 degrees north and 31 degrees south of the equator over an area 25 per cent land and 75 per cent water.

An estimated 9.525 kilograms (21,000 pounds) of orbital hardware will be destroyed by reentry heat. About 726 kg (1,600 lb.) may survive reentry in several pieces.

Such a breakup of reentering spacecraft is normal and has not, in the history of space flight, resulted in personal or property damage on Earth. The possibility of an individual or a structure being struck by a fragment of Pegasus that survives reentry is considered to be less than that due to meteorites impacting on the Earth.

Pegasus 1, launched Feb. 16, 1965, as used to gather micrometeoroid data for use in the design of spacecraft. Data collection stopped Jan. 13, 1968. Pegasus 1 was one of three such spacecraft launched in 1965. Pegasus 2 is still in orbit and Pegasus 3 reentered Aug. 4, 1969, in the Pacific Ocean.

The Pegasus 1 assembly weighs about 10,430 kg (23,000 lb.) and is 21 meters (70 feet) long. The spacecraft itself

weighs about 1,950 kg (3,200 lb.). It is attached to the empty S-IV stage and the instrument unit of the Saturn I launch vehicle. Neither the satellite nor the attached S-IV stage have radioactive nuclear power sources or materials aboard.

## Voyager Passes Asteroid Belt

NASA's Voyager 1 has completed its transit of the asteroid belt, leaving the region Sept. 8 on its journey to Jupiter and Saturn. Voyager 2 will exit on Oct. 21.

Voyager 1 entered the asteroid belt last Dec. 10, a few hours behind Voyager 2. Voyager 1, launched after Voyager 2, has been flying a faster trajectory, and has been steadily pulling ahead of its companion since overtaking it last Dec.

Voyager 1 will reach its closest approach to Jupiter March 5, 1979, when it will pass 286,000 km (178,000 mi.) from the giant planet. Voyager 2 will pass 643,000 km (399,000 mi.) from Jupiter on July 1979.

Both spacecraft will continue on to the ringed-planet Saturn. Voyager 1 will arrive in November 1980, flying within 2,500 miles of the surface of Saturn's largest satellite, Titan. Voyager 2 will arrive at Saturn in August 1981. Voyager 2 has the option of continuing on to a January 1986 encounter with the planet Uranus.

## Shuttle Maneuver Engine Tested at White Sands

A version of the rocket engine that will be used to maneuver the Space Shuttle Orbiter was test-fired Sept. 6 at the NASA reuseable for up to 100 space missions White Sands Test Facility near Las with 1000 starts for a total 15 hours firing Cruces, NM.

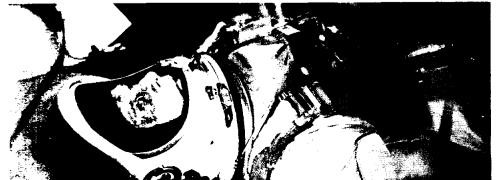
The 10-second duration burn was the first test firing of the 6000-pound thrust engine in combination with the propellant tanks, feedlines and other components in the Orbital Maneuvering Subsystem (OMS) pod. Shuttle Orbiter has OMS pods on each side of the aft fuselage and adjacent to the three 470,000-pound thrust main engines that boost the spacecraft into orbit.

The OMS engine burn nitrogen tetrox-

ide and monomethyl hydrazine as oxidizer and fuel, and are designed to be lifetime. Among the orbital duties of the OMS engines are thrust for final orbital insertion at the end of launch phase, orbit circularization, orbit transfer and changing, rendezvous maneuvers, and deorbit

Wednesday's test firing was a checkout of the OMS pod and test stand compatibility and of the test data system.

The current series of 24 engine firings up to 60-seconds duration was completed the following day.



Astronaut Jack Lousma tests procedures list prior to a simulated takeoff, with mockup orbiter in

Story on Page 4 vertical position

# Attention, Carpoolers

Several changes in Carpool Reserved Parking have come about as a result of The Center's annual review of the program. Carpoolers, take note.

As of Oct. 10, carpools must consist of three Civil Service, contract, or military employees who plan to commute to and from work daily.

Each carpool member will be required to appear in person at the Security Branch to sign the revised Carpool Form 162. The

form certifies the employee is a regular rider and understands the penalty for submitting false information.

All previously assigned carpool spaces will be cancelled at the close of business Oct. 6, 1978. A subsequent JSC announcement will explain details for submitting new forms. After the forms have been submitted, a drawing by lot will decide new space assignments.

# Coming Activities at Gilruth Center

#### SPECIAL ANNOUNCEMENTS

Fishing Contest: Participate in the National Industrial Recreation Association Annual Fishing Contest. No cost. Fresh & Salt water divisions. Entry forms and tournament rules are available at the Recreation Facility. The NASA entry covers only JSC Civil Servants. Contractors should check their company employee club representatives to see if their company has paid the necessary entry fee to make them eligible.

#### **TOTAL EVENTS**

The regular Total Events program offers a 25% discount (14-day deadline) on mail orders and a 10% discount (10day deadline) on telephone orders. Payment options include Master Charge and Visa credit cards.

Sports:

Houston Astros **Houston Rockets** Houston Hurricane U of H Football U of H Basketball Rice Univ. Football Rice Univ. Basketball Womens Professional Tennis Tour Texas Southern Football Delta Downs Race Track Houston Open Golf Tournament Meyer Speedway

Special Events

Ringling Bros. Barnum & Bailey Circus Shrine Circus Ice Capades Harlem Globetrotters

Theater

Alley Theater Theater Under the Stars Celebrity Circus Theater Cabaret Theater Houston Ballet Houston Grand Opera **Houston Symphony** 

Cinema

Tarcar Theater Loews State Theater American Multi-cinema Theater General Cinema

For applications and further information see the bulletin board displays in your work areas, Cafeterias and in Recreation center.

#### **CLASSES**

Sign-up in person at the Gilruth Recreation Center. Payment is due upon registration and is non-refundable. Call x3594 for further information.

#### **Auto Mechanics**

Intermediate, Sign-up deadline is Oct. 4. Classes meet on Wednesdays, 7:15-9:15 p.m., Room 215, Oct. 11, 18, 25 and Nov. 1. Labs meet on Saturdays Oct. 21, 28. Fee: \$45.00 per person.

#### **SPORTS**

The next league sport season at the Recreation Center will be Men's & Women's Basketball. There will be a 7week season before Christmas and a 10 week season following New Years. Signup for the 7-week season will be Oct. 11 thru Oct. 19. Further details will be announced as the sign-up period ap-

6th Intercenter Running Competition: Details are not yet available but are to be announced shortly by this race's

sponsor, Langley Research Center. We do know that the event will be held either the 3rd or 4th week of October. Also, we can expect some format changes, but it will continue along the same basic lines as in previous intercenter events. Past participants will be mailed details as they are available. (Has your mail code changed since last April?)

#### OFFICIALS NEEDED

Are you a sanctioned Basketball Official, or are you interested in learning to officiate games? The Gilruth Recreation Facility can use interested employees for basketball seasons before and after Christmas. Orientation & testing sessions must be attended before you can be employed. Call x3594 for further informa-

#### Bay Area Running Club 1978 Schedule

Date	Time	Events	Location	Fee	Contact
Oct. 7	9 a.m.	20 KM 5 KM 1 Mile	Gilruth Rec. Facility	3.50	R. Barton, 474-2110
Oct. 29	5 p.m.	4 Mile 1 Mile	Clear Lake High School	.50	R. Arbaugh 482-0032
Nov. 26	3 p.m.	6 Mile 1 Mile	Gilruth Rec. Facility	1.00	R. Barton, 474-2110
Dec. 17	3 p.m.	5 Mile 1 Mile	Clear Lake High School	.50	R. Arbaugh 482-0032

**Unidentified Spectators** 

Florida birds cackle and caw, perhaps amused, as they watch astronaut candidates complete water survival training last month. The birds made a thought-provoking view for candidates and

## What's cookin' in the JSC cafeteria

#### **WEEK OF SEPT 18 - 22**

MONDAY: Cream of Celery Soup; Braised Beef Ribs; Chicken a la King; Enchiladas w/chili; Italian Cutlet (Special); Brussel Sprouts, Navy Beans. Standard Daily Items; Roast Beef; Baked Ham; Fried Chicken; Fried Fish; Chopped Sirloin; Selection of Salads, Sandwiches

TUESDAY: Beef & Barley Soup; Turkey & Dressing; Country Style Steak; Beef Ravioli; Stuffed Cabbage (Special); Corn Cobette; Okra & Tomatoes: French Beans.

WEDNESDAY: Clam Chowder; Catfish w/hush puppies; Roast Pork w/dressing; 8 oz T Bone Steak; BBQ Plate; Chinese Pepper Steak (Special); Broccoli; Macaroni w/cheese; Stewed Tomatoes.

THURSDAY; Cream of Tomato Soup; Beef Tacos; BBQ Ham Slice; Hungarian Goulash; Chicken Fried Steak (Special): Spinach, Pinto Beans; Beets.

FRIDAY: Seafood Gumbo; Liver w/onions; Deviled Crabs; Roast Beef w/dressing; Seafood Platter; Tuna & Noodle Casserole (Special); Whipped Potatoes; Peas; Cauliflower.

#### **WEEK OF SEPT 25 - 29**

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

TUESDAY: Split Pea Soup; Shrimp Creole; Salisbury steak; 8 oz. T Bone Steak; Fried Chicken (Special); Mixed Vegetables; Beets.

WEDNESDAY: Clam Chowder & Vegetable Soup; Fried Catfish w/hush puppies; Braised Beef Ribs; BBQ Plate; Weiners & Beans; Shrimp Salad; Stuffed Bell Pepper (Special); Corn O Brian: Italian Green Beans: Rice.

THURSDAY: Chicken Noodle Soup; Beef Stroganoff; Turkey & Dressing; BBQ Smoked Link (Special); Lima Beans; Buttered Squash; Spanish Rice

FRIDAY; Seafood Gumbo; Broiled Flounder; Liver w/onions; Seafood Platter; Fried Shrimp; Meat Sauce & Spaghetti; (Special); Green Beans; Buttered Broccoli; Whipped Potato.

## EAA Attractions

#### **SOUL DANCE POSTPONED**

The Soul Dance scheduled for September 23 has been postponed due to conflicts with other events. The dance will be rescheduled at a later date.

#### **Fall Country Western Dance**

The Fall Country Western Dance on October 20 will have a new format. Because of the conflicts with Friday night High School Football, there will be two ticket prices—one for those who want to come early and one for those who want to come after games. So shine up your boots and practice your longneck grip and plan to dance to good CW music Bobby Heiman and High Country.

#### **ASTROWORLD DISCOUNT**

Astroworld tickets will be discounted \$3.00 to \$5.50 for the remainder of the season.

#### **DEFENSIVE DRIVING**

The EAA recently sponsored two defensive driving courses at the Gilruth Recreation Center. There are no more courses planned for the rest of this year. If you want to take a Defensive Driving Course the College of the Mainland offers a full schedule through December. Call Beverly Douglas 938-1211 Ext. 297 for information.

#### Available at Bldg. 11 **Exchange Store**

- Disney Magic Kingdom cards Free
- Astroworld-Six Flags Funseekers cards - Free
- Astroworld tickets \$5.50 (reg. \$8.50)
- Six Flags tickets \$6.75 (reg. \$8.50) Dean Goss Dinner Theater - \$8.00
- single; \$16.00 double; good any night except Saturday General Cinema Theater \$2.40 (reg

## **Bienvenidos**

Friday, Sept. 15 is Hispanic Heritage Day, and Johnson Space Center employees are celebrating with a program in Building 2 auditorium starting at 1:30 p.m.

The Ballet Folklorico de la Universidad de Mexico will perform the finale and local group of Guantamentecos will show typical dress from Guatemala in keeping with the program's theme, "Cultural

#### Our Error

Roundup mistakenly listed the deadline for teams to sign up for the softball tournament as Sept. 21. The deadline was Sept. 11, and Roundup regrets the error.

Pluralism." Manuel Urbina, Ph.D., professor of history from the College of the Mainland, is the principal speaker.

A merienda (refreshments) will be served in the lobby at the close of the program.

Vamonos.

\$3 to \$3.75)

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Editor: Kay Ebeling Photographer: A. "Pat" Patnesky

#### Family Services To Open In Bay Area

United Way is funding four agencies that will be located in the space center area, opening Oct. 2.

The Bay Area Committee on Drug Abuse, the Gulf Coast Legal Foundation, the Bay Area Crisis Helpline, and Big Brothers/Big Sisters, will work along with Family Service at the new Bay Area Service Center located at 16911 El Camino Real in the Alpha Building at Clear Lake.

More agencies will be added to the group as the needs arise, said E. F. Christman, executive director of the host agency.

The center will have 3,300 feet of office space with a common reception area, meeting room, and storage space.

# Taylor Wins Employee of the Month Award

Reuben E. Taylor has led the NASA effort to apply space technology to community waste water treatment. His outstanding achievements have won him the Employee of the Month Award for August from the Federal Women's Program Council of the Houston Federal Executive Board.

Taylor is Project Manager for the NASA project to develop an advanced water monitor system (WMS). Under his leadership, the field and technology have advanced considerably. As management engineer he has developed operation of a municipal waste treatment plant, providing a technology base for future applications.

The award is part of FWPC policy to recognize minorities and women in the Federal service for outstanding contributions to their employment and community.

Along with his work at NASA, Taylor serves in the League of United Latin American Citizens, and he often gives advice and assistance to younger Hispanics who are beginning careers at Johnson Space Center. He is an Equal Employment Opportunity Counselor.

Taylor began his career as a mechanical engineer at Edwards Air Force Base in California after graduation from the University of Texas in 1960 with a bachelors degree in mechanical engineering. He joined JSC in 1964 as Assistant Subsystem Manager of the Lunar Module (LM) Ascent Propulsion Subsystem, which was used to lift the spacecraft off the surface of the Moon and link it with the command module, in orbit around the Moon, for the astronauts' return to Earth. Taylor later had full responsibility for the LM Ascent Propulsion Subsystem until completion of Apollo 16 in 1972.

After the success of WMS, Taylor will be studying technical and economic aspects of using orbiting solar reflectors (mirrors) in Earth orbit to beam solar energy to land-based power conversion stations.

### Weekend Competition

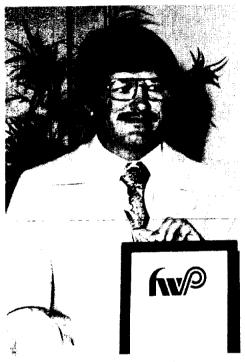
## Models Take to the Skies

Radio-controlled model airplanes will fly the skies on the antenna range behind Building 14 on Saturday and Sunday Sept. 16 and 17 during a model airplane contest sponsored by the MSC Radio Control Club.

On Saturday, scale model fliers will compete, and according to Owen Morris, spokesman for the club, these models are faithful reproductions of specific aircraft, judged both for appearance and capability.

Sunday modelers will fly radio-controlled versions of ships designed 25 to 30 years ago, competing for maximum flight duration. In the afternoon a new class of large models, one-fourth the size of full scale aircraft, will take part in a fly-in.

Static judging starts at 8 a.m. with the show getting under way at 10 and lasting until 5 p.m.



Reuben E. Taylor

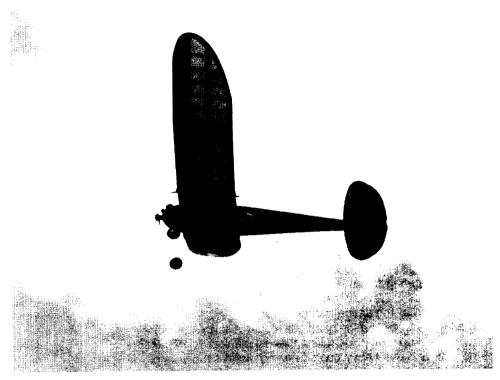
## September Co-op Performs Work Of a Graduate

Jeffry A. King is a Co-op Education Student who is capable of performing the work of an experienced engineer. Because of his accomplishments at JSC, King is Co-op Education Student of the Month for September.

A senior in Aeronautical Engineering at Purdue University, King's first assignments at JSC were supplying direct support to engineering and operations personnel, including flight crews, during production runs on the Shuttle Procedures Simulator (SPS). King quickly became proficient in the operations, and assumed more difficult assignments, including formulation of an actuator model with linear and non-linear characteristics, a formulation that had to be specifically designed for SPS.

King also performed computer programming assignments that are typically given to graduate engineers. He has made improvements to data reduction software that are valuable both in SPS Phase I and on the upcoming Phase II simulator.

King's co-workers agree that along with his technical capability, King is a diligent and enthusiastic employee.



# Roundup Swap Shop

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. Noncommercial personal ads should be about 20 words and include home phone number. Typed or printed ad copy must be received by AP3/Roundup by Wednesday of the week prior to publication.

#### Cars & Trucks

'76 Prestige Dodge Royal Monaco, 2 dr. Hardtop with 11,200 miles. 334-1925 after 5; Original costs \$8,900, only \$3,800

'73 Plymouth 4 dr. Satellite sdn, aircon, radio, new tires & battery, top condition, Ruth Corbett 334-1629.

'52 Chev. 2 dr. sdn, new paint, brakes, battery, king pins, tires, upholstery, etc. 334-1925 after 5.

'71 Buick Electra 4 dr. AM/FM all power, low mileage, excellent condition \$995, Call 944-7632 after 4:30 pm

'73 Buick Electra 225, 2 dr. vinyl top, full pwr, \$1500. Dave X2753

'72 Toyota, Mark II, 4 dr. sedan, 6 cylinder,

AC, good condition 944-5624 74 Ford Van, 3/4 ton A/C white \$2100. Call

'74 Ford Van, 3/4 ton A/C white \$2100. Cal 921-0025 or 944-7221.

16 1/2 Ft. Fleetwing travel trailer. Completely self-contained: Shower, toilet, air cond., hot water, range, sink, refrig, awning, etc. Sleeps 6. Many extras. 2 yrs. old \$3,000 Samouce 482-0702.

Utility trailer, Sears \$165 488-0266. Thomas Barry X5187.

15 ft. travel trailer. Sleeps family of 5. Ice Box, L.P. Stove & oven. Very good condition.

\$1800. 482-7073.

'70 Chevy Wagon, Kingswood Estate, 3 seats, air, pwr steering & Brakes, auto, AM PB Radio, steel bltd radials, extra clean, runs like a top, great second family car or back to school special/surfer's special. \$1,050 333-3810 after 6 pm.

'75 Ford Super cab, air, p/s, p/b, Camper shell. Patterson 331-5550.

#### Boats & planes

'74 Skyhawk II, for rent, full I.F.R., nice for vacation trip. 471-4627 Poindexter

16 Ashburn, fibgl bottom, 35 HP Evinrude ITLR \$350, 485-2165 after 4

1/3 Cessna Cardinal partnership, for sale, \$5,000. 1968 Cardinal, 177, full IFR, new avionics, 1600TT, excellent cond., Based at Hobby. Frank Buzzard, 482-2067

#### Miscellaneous

Used tire, good spare for compact car. Size 6.00-15 \$6. Call after 5 pm. 554-7023 Felipe

500 Cook pair strips \$850. Also 820 13 cent postage stamps, \$100. Sugano 482-5393 after 5

Two swivel pedestals (left & right side) for captains chairs in 77 Ford van. \$20 each or \$30 for both. Bauch 333-3382.

Attention: Part-Time attorneys and Law students-All part-time attorneys and law students at JSC who would be interested in organizing a social club or discussion group, please contact Dick Regenburgh after 5 at 482-1156.

#### Musical Instruments

King Comet, like new. \$175 Wm. Forsyth 534-3113 after 5.

For sale: Electric guitar, case and amplifier. Good condition. \$70. Greg 482-7643.

#### Wanted

Boys 20" bike. Call 488-0266.

#### Cameras & Stereos

New 40 Channel CB. One year Warranty. List \$129. Will sell \$75. Mary x3128.

New Cobra XLR CB Radio, for sale, still in box. Paid \$280, will sell for \$125. 333-2787. R. K. Siler

Datsun AM/FM stereo radio, brand new, Craig under-the-dash 8 tr. tape player w/2 surface mount speakers (used 4 mos.), Sanyo 8 track cassette player/recorder tape deck, 10 mos. old 869-8901

#### **Property & Rentals**

House of apartment in Clear Lake Area for Oct., Nov., and possibly Dec. Can exchange for apartment in Honolulu during this period. Giuli

Rent: Lakeside vacation retreat at Cape Royale on Lake Livingston. New 3-bdrm., waterfront home compl furn, Facil inc tennis, pool, golf, boat launch. Three day min. 488-3746.

Room for rent to single man. Carpeted, AC, bills paid. \$155 month 471-4387.

Skies-R-Us-Rent: 2 bedroom condo in Dillon or Breckenridge. Weekly rates. Fully furnished and equipped. Hernandez 488-2289 after 4.

Galveston, West End 2 Br, By-the-Sea condo, full furn, \$180/wk off season, \$260 wk/in season. Clements, 474-2622

Gulf at your doorstep, exclnt. fishing at this cottage-by-the-sea, 15 min. from Galveston Island. \$200 per week or \$60 per day (2 day minimum) Call Horton 483-3734

Vacation Lake Livingston Cape Royale a beautiful resort community with all amenities. Enjoy charming custom 3-2-1 compl. furn home rent wk/mo/yr. 488-4487

#### Household Articles

Country French Dining room furniture: table w/3 leaves, 6 chairs w/cane backs, china cabinet. Pecan finish, extra fine. All \$1000 (will sell china seperate) Samouce 482-0702.

Baby Crib, Simmons double drop-sides, plus Montgomery Ward firm coil spring mattress. Both excellent condition. Together only \$35. 488-2735

## Egress Exercises In Building 9



As technicians and photographers stand waiting, two astronauts are inside a mockup of an orbiter crew station talking through procedures they would use during an emergency landing. They are preparing for an emergency egress, part of a two-week orbiter crew station review that took place Aug. 28 through Sept. 8 in Building 9A at the space center.

The hatch opens and the head of a man in a space suit appears from the mockup orbiter. He rolls a thermal blanket down the side of the ship and, his heavy boots banging against the side of the ship, climbs out of the cockpit and slides down the side to a mattress on the floor below. The other astronaut follows close behind.

"They'd be going a lot faster if there were smoke," says Jim Smothermon, crew station manager. "This is a walk-through."

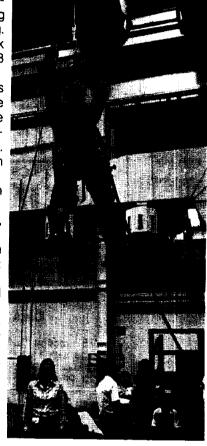
The review allows the astronauts to evaluate the crew station and work with equipment, reporting any problems they encounter and making suggestions for improvements on future runs, Smothermon explains.

For the astronauts it is the first time they have their hands on equipment that will be used during the first orbiter mission: cameras, food, clothing, etc.

After hitting the mattress, the astronauts remove their suits and head for debreifing.

"There weren't any problems," says Gordon Fullerton, his helmet still in his hand. "Except that it's mockup equipment. Only problem was that the equipment we're working with isn't real."

As the astronauts walk off, an observer comments, "Not bad for beginners. A few more hundred runs and they'll have it down pat."







Top: Al Rochrodr adjusts Fred Hayes' helmet while Jack Lousma waits his turn. Top left: Vance Brand tests "sky genie." Top right: With orbiter in vertical position, Lousma prepares to enter. Left: Bob Crippen performs egress, and Bottom Left: John Young drops to the floor.



# It's All in the Delivery. . .

A mechanical engineer performed magic tricks that anyone could see through. An electrical engineer babbled about clothes left in a hotel 400 miles away, and her physicist husband described a ride in the country in his new sportscar.

These were highlights of the Spaceland Toastmasters Club humorous speech contest held Sat. Aug. 23, at Bonanza Restaurant.

JSC employees Gene Cook and Sharon Babb won first place in their categories. They will go on to the area competition to be held Fri. Sept. 22 at Gilruth Center at 7 p.m.

Cook's speech, "Do You Believe in Magic," featured deadpan wizardry as he turned a can of Coke into a chicken salad sandwich, "quickly, while no one was looking." Then, in honor of great magicians, Cook hypnotized himself, dangling a wristwatch in front of his eyes, and did an impression of Marcel Marceau . . . not saying a word.

Babb took honors in the Table Topics competition, where Toastmasters made extemporaneous speeches on a subject announced on-the-spot. She told a story of waking up after a long vacation and discovering she'd left her clothes at the hotel. Not remembering the hotel's name, she had to empty out a trip-jammed pocketbook—picking through ticket stubs and Disneyland mementos—until she found the receipt. "Sure enough, they had my clothes," she said. "They're just 400 miles away. Now what do I do?"

Gus Babb told of the serenity of countryside scenery from his new sportscar. "The only cloud in the sky was the one over the radiator." he said.

Toastmasters is a training device set up to help employees at JSC gain confidence in public speaking and making presentations. The group meets alternate Wednesdays over the noon hour, and persons interested should contact Anngie Johnson at ext. 6137.