

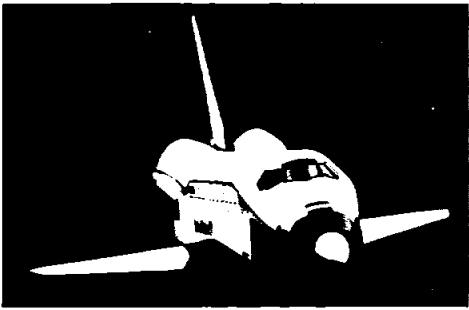
ROUNDUP

Lyndon B. Johnson
Space Center

NASA

January 25, 1980 Houston, Texas

Vol. 18, No. 26



Flight teams gearing up

Simulation covers 30 hours of flight

With the first flight of *Columbia* now months away, flight controllers and astronauts at JSC are gearing up for the long awaited mission. As of *Roundup* press time Mission Control Center was scheduled to have come alive Thursday, January 24, with a 30-hour mock flight of the first Shuttle mission.

The "flight" began at 8 a.m. CST with launch and ran continuously through orbital operations to landing.

During the mock mission, flight directors and their teams of flight controllers monitored Orbiter systems' health, performed navigation and targeting tasks, and supported crew performance of the mission timeline.

Approximately 500 people were involved in the "flight," including John Young and Bob Crippen, the prime crew for *Columbia's* first flight, and Joe Engle and Dick Truly, back-up crew.

Flight Directors for the three flight control teams will be Neil Hutchinson, Launch team; Chuck Lewis, Orbiter team; and Don Puddy, Deorbit/landing team.

Purpose of the simulation is to evaluate operations and procedures over an extended period of the mission. All previous simulations have been of relatively shortermission time intervals, such as launch, deorbit and entry, and initial systems activation.

Additional 30-hour practice flights will be run every six weeks to two months to prepare for the real flight, scheduled for later this year.

Test a milestone for schedule

The Orbiter Integrated Test which was completed on Friday, January 18, put the *Columbia* through all phases of a mission, and was described by test officials at KSC as a "total success."

The 11-day test put the Orbiter *Columbia*, astronauts, and ground support crews through all phases of a launch and ascent into orbit, on-orbit operations, and descent procedures. Norm Carlson, KSC director, said, "We didn't expect the overall test would take this long, but we did expect a number of problems, which are always experienced in a new system, especially one as complex as this." The overall program, Mr. Carlson said "was a total success."

After the test, prime crew member Astronaut Robert Crippen said, "The Shuttle (Orbiter) is a really spectacular machine which will do a lot for this country." Fellow crewman, John W. Young, said the *Columbia* performed "like a champ."

Five separate launch and ascent runs



Engle and Truly



Crippen and Young

along with two-and-a-half days of on-orbit operations and two descent and landing runs were performed. Everything from operating the cargo bay doors to testing the onboard food warmer and vacuum cleaner was carried out by crew members while they exercised systems during the on-orbit phase.

NASA administrator Dr. Robert Frosch described the test completion as a major milestone in the Shuttle schedule. He

told members of the press that the first Shuttle launch will probably take place in the September/October period.

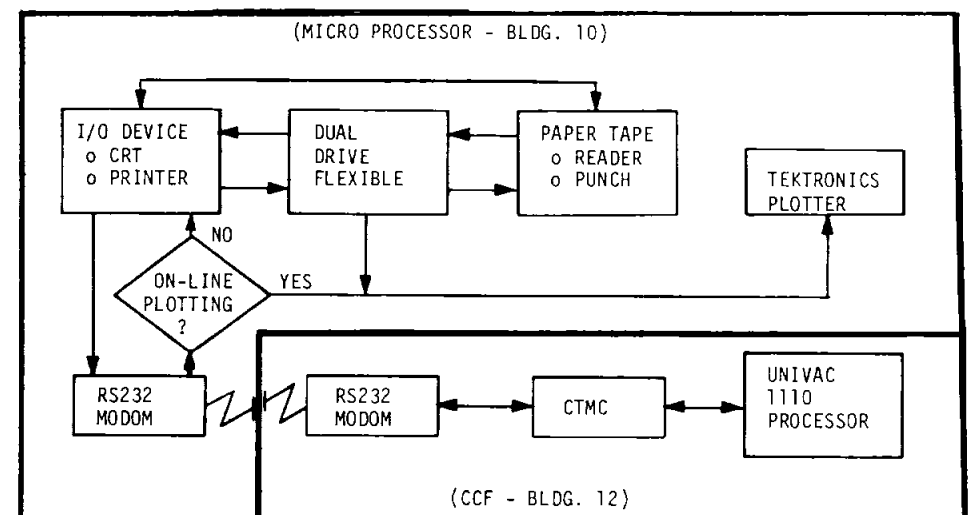
Meanwhile at the NASA facility at Bay St. Louis, Mississippi, technicians were completing preparations for the second full duration firing of the three main engines. This test calls for the cluster of three engines to fire for 550 seconds. It is now scheduled for Wednesday, January 30.

Passengers, no Shuttle reservations

Contrary to recently published reports, NASA is not accepting reservations for potential passengers to ride on Space Shuttle missions.

The implication that the agency is accepting reservations for \$500 has been made in recent articles about NASA's program to carry small experimental payloads on the Space Shuttle on a space-available basis. These payloads are limited to sizes up to 0.14 cubic meters and weights up to 91 kilograms, and \$500 earnest money is required to reserve space for a payload.

NASA has no plans to offer seats on Shuttle flights to paying passengers.



Remote interface augments TSD tasks

Technical Services Division is taking advantage of a newly developed "distributed processing" capability, where central and remote computers share data processing functions. Adoption of the new process has cut R&D task time from days to minutes. A technician in Building 10 can now sit at a console editing data on a microprocessor, transmit the data to the Central Computer Facility in Building 12 (the UNIVAC 1100), execute programs to the CCF, and moments later receive output from the CCF—all without ever leaving the console. "It works like a telephone line," says Joe Elliott, Chief of the Machine Branch for TSD. "There's a little box next to the console that does it all." Institutional Data Systems Division, in cooperation with the Technical Services Division, acquired and installed the distributed processing equipment which, as of the first of the year, is in full use. "It has proven invaluable," say TSD employees.

RUNNERS: The first of the Rec Center's monthly races takes place Saturday, January 26, at

Gilruth Center. Starting time is 9 a.m. and entry fee is 50 cents. No pre-registration is required.

R&D can lead to economic spinoffs

Fourth in a Series On Space Industrialization

by Kay Ebeling

Satellites started circling the globe in the 1950s. Sputnik went up; the U.S. followed with Pioneers I and II. Round and round the world they went, and people all over had the same question: What are they good for? What is their practical application?

The same questions come up daily in the Space Shuttle program, but a look at today's vast global communications industry shows a precedent where research and development for the sake of advancing technology has paid off by advancing the American economy as well.

The Fifties moved into the Sixties, and satellites became more streamlined, more versatile. Then Bell Telephone put a

Telstar into low-Earth orbit and tested it for long distance communications.

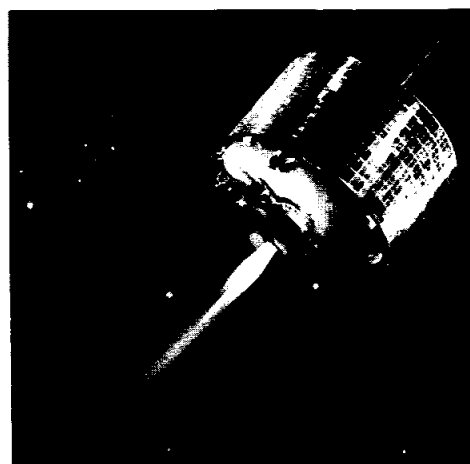
Further NASA research proved that Bell could use geosynchronous orbit and decrease costs. The stationary orbit made possible today's small cable receivers instead of the phone company's large tracking stations.

So began NASA's unique relationship with the private sector: After aerospace research and development is proved, the technology is turned over to American industry.

Only in this case it was necessary to create a new entity, as no existing corporation was operating in space.

Congress set a precedent in the creation of COMSAT. It was the first time the U.S. government had created a corporation in response to a newly created technology.

Congress created the COMSAT Corporation with the Communications



1964 Syncom concept

Satellite Act of 1962. The document specifically states that the entity will be "a corporation for profit which will not be an agency or establishment of the U.S. Government."

COMSAT grew. Communications satellites improved. And new products are now past the drawing boards.

In the near future, satellite technology will go into environmental information services; it is already being applied to manufacture Earth station components, signal processing systems equipment, fiber optics communications equipment, new microwave filters and circuits, and high-frequency amplifying devices.

"It's hard to speculate if the technology would have advanced as rapidly, or as much, if the communications industry had remained a government agency," says Mr. Sam Fordyce of Headquarters' Communication Division. "But for one example, the cost of phone calls has gone down because competition from satellites spurred cable communications to improve."

Please turn to Page 4

Bulletin Board

Get Your Swing Into Shape, and Win

The JSC Golf Association opens its 1980 season with a team tournament on February 18, and is now accepting applications for membership. The JSCGA season runs from February to November with eight medal tournaments, three fun tournaments, a 36-hole championship tournament, a four-ball tournament, and



two special events to be announced later. Dues are \$34 per season, of which \$22.50 is devoted to prize money for the medal and fun tournaments. Contact Mike Gremillion, X3753, for details and application forms. Deadline for joining in time for the opening tournament is February 13. Applications will be accepted up until March 1.

Vacancies still exist in the CPR Training course and the Women's Exercise Class at Gilruth Center. Contact x3594 for more information.

On Sale at the JSC Exchange Store

(Store Hours 10 am to 2 pm)

Dean Goss Tickets - \$10 Single
\$20 Couple (Reg. \$14.50)
ABC Theatre Tickets - \$2 each
General Cinema Theatre Tickets - \$2.40 each
Magic Kingdom Cards - Free
Entertainment 80' Coupon Book - \$15 each

Learn the Basics Of a Small Business

The Active Corps of Executives and the Small Business Administration will sponsor a workshop on the "BASICS OF RUNNING A SMALL BUSINESS" at the University of Houston Continuing Education Center, 4800 Calhoun, Entrance no. 1, Houston, Texas, on January 30 & 31 in the evening. For further information, call 226-4945.

Armstrong to Narrate Series on Darwin

The *Voyage of Charles Darwin* series, narrated by Neil Armstrong, will air Sundays at 7 p.m. starting January 27 on PBS Channel 8. It is a seven-part story of the man who revolutionized Man's view of himself. First episode, "I Was Considered a Very Ordinary Boy," takes Darwin from medical studies through studies for the clergy. Episode two, aired February 3, is titled, "My Mind Was a Chaos of Delight."

Saturdays at 10 a.m. PBS covers *Energy in the Eighties*; and on Sunday February 3 *Projection '80*, a talkshow, looks into the future of modern science and academics, presented in conjunction with the University of Houston.

Auditions Open For Skilled Singers

Auditions for the *Bev Henson Chorale*, a select mixed concert choir of 30 to 40 members, will be held Sunday, February 3, from 2 to 5 p.m. at the Spring Woods United Methodist Church, 1711 W. FM 1960. Come prepared to sing one selection of your choice. An accompanist will be provided, but singers may bring their own. The *Bev Henson Chorale* is a professional quality chorus that will perform in Houston and surrounding counties from a base in Northwest Houston. For evening auditions, or for other information, call 444-3545.

CU has 3 positions open; Nominations due Feb. 15

The JSC Federal Credit Union will hold its annual meeting March 7 at the Gilruth Center at 7 p.m. Voting for positions for the Board of Directors and Credit Committee will occur on this day.

Members interested in running for office should send their name and brief resume to the Nominating Committee:

- Jerry Haptonstall—Nominating Committee Chairman—Mail Code BB52

- Eleanor Der Bing—Committee member—Mail Code BB62

- Ray Chambers—Committee member—Mail Code BB62

The deadline for submitting names to the Nominating Committee is February 15.

There are three positions open this year on the Board of Directors, each for

three-year terms. Two positions are open on the Credit Committee, one three-year term and one two-year term. As provided by the by-laws, no names for candidacy will be accepted from the floor at the annual meeting.

A member whose name is not selected by the Nominating Committee may have his or her name added to the roster by presenting the Nominating Committee members with a petition signed by 200 members stating their desire to have that name added.

Voting machines will be at the credit union on March 7 from 9 a.m. to 3 p.m. Machines will then be moved to the Gilruth Center from 4 p.m. to 7:30 p.m.

Candidates must be 18 years or older and be a member of the JSC Federal Credit Union. To vote, members must be 16 years or older.

There's always one in a crowd

JSC's tourguides know protocol, tact, and self-control. They have to. The Space Center's 1.5 million visitors a year usually have a reasonable layman's knowledge of the space program. But once in a while a guest throws in an innocent absurd question, and the tourguides have to exercise each of the three above qualities, plus a few more.

For example:

"When is Skylab going up?"

"What does everyone here at NASA do when there is no mission going on?"

"Why is the Lunar Module covered in wrapping paper?"

"Where do the astronauts live on site?"

"Where do you track UFOs?"

"When is the Saturn 5 rocket going to be stood up and launched?"

"Where are the launch pads?"

"Where are the anti-gravity chambers?"

"Are those rocks around the LM really lunar samples?"

"Is the Shuttle launched from the back of a 747?"

One tour guide spoke with a man who said he was from Jupiter, a woman visited the site recently who was certain she was being tracked through Comsat by aliens, and one gentleman urgently wanted to take NASA officials to the site where American scientists are being brain-washed.

As always, the tour guides smile, nod with understanding, explain real space projects as best they can, and marvel at the end of the day about the unique job they hold at NASA.



Billie Deason
Outstanding Secretary

Billie Deason's initiative and foresight are qualifications the Secretary of the Month award was established to acknowledge. Her co-workers say she has excellent rapport with fellow workers, and she shows excellent judgment in setting priorities and searching for methods to perform unusual tasks.

Ms. Deason is the Biomedical Branch Secretary.

While keeping up with a heavy secretarial workload, Ms. Deason is never too busy to assist the European visitors who come to the lab to work on Spacelab One adapt to life in the States. She helps them place phone calls, make plane reservations and take care of other tasks.

Ms. Deason is always looking for new responsibilities as well as ways to lighten the load of routine tasks for technical personnel in the Branch. At the same time, she is attending San Jacinto Junior College taking courses in writing.

In all, Ms. Deason's enthusiasm for her work, ambition to make more of her job, and initiative to get the training she needs to increase her qualifications have earned her the Outstanding Secretary Award for December 1979.

The Hatch Act is still there

With the Presidential elections already underway, JSC Federal employees may need this reminder of their restrictions and protections under the Hatch Act.

Basically, the Hatch Act, passed in 1939, protects the Federal employee against political influence that might damage his job tenure. The act places certain restrictions on the political activities of Federal employees.

Generally, an employee may not use his official authority or influence to interfere with or affect the result of an election, and he may not take an active part in

political management or in political campaigns of a partisan nature.

The following activities are permissible under the Hatch Act:

- You have the right to register and vote as you choose in any election.

- You have the right to express your opinions privately and publicly on all political subjects and candidates as long as you do not do so in such a manner as to take an active part in political management or political campaigns of a partisan nature.

- You may make a voluntary campaign contribution to a political party or

organization.

- You may accept appointment to a public office provided service in the office will not conflict or interfere with the efficient discharge of your Federal duties.

- You may participate in a non-partisan election either as a candidate or in support of (or in opposition to) a candidate, and you may, if elected, serve in the office if such service will not conflict or interfere with the efficient discharge of your Federal duties

- You may serve as an election clerk or judge, or in a similar position, to perform non-partisan duties as prescribed by state or local law.

- You may be politically active on an issue which is not identified with a political party such as a constitutional amendment, referendum, approval of a municipal ordinance, or any similar question or issue.

- You may participate in non-partisan activities of a civic, community, social, labor, professional, or similar organization.

- You may be a member of a political party or political gathering but you may not take an active part in conducting or managing such gatherings.

- You may sign petitions, including nominating petitions, but may not initiate them or canvass for the signatures of others if they are nominating petitions for candidates in partisan elections.

- You may petition Congress or any Member of Congress, such as by writing to your Congressman to tell him how you think he should vote on a particular issue.

Bland honors

William Bland recently received the Exceptional Service Award from the President's Commission on the Accident at Three Mile Island for his performance as a member of the Technical Assessment Task Force. Mr. Bland retired from NASA service effective December 18, 1979, as Deputy Director of Safety, Reliability, and Quality Assurance at JSC.

"It is proper that there should always remain one target over the horizon."

—James Michener

Five Fridays fluke for Feds

Being Leap Year, this February has 29 days, five of which are Fridays.

Three of those Fridays, by virtue of NASA's schedule, will be pay-days. A February with five Fridays only occurs about three times in a century.

A check at JPL's almost perpetual calendar (from 1776 to 2000) shows that in that period five-Friday Februaries occurred in 1788, 1828, 1856, 1884, 1924, 1952, and now in 1980.

It will not happen again in this century.

NASA invention, photography & medical uses

A new autoradiographic process, developed by NASA to enhance astronomy photographs, was used in the picture shown here at left to restore an old faded photograph.

Barbara S. Askins, NASA chemist at Marshall, was named 1978 National Inventor of the Year by the Association for the Advancement of Inventions and Innovations for inventing the image enhancement process.

This triple thrust spinoff from space technology has potential for use in the medical field, cutting down patient exposure to X-rays, as well as its value in photo restoration.

The process uses minute amounts of radioactive materials to bring out details, and it can augment medical X-ray film by as much as 80 to 90%.

"Look to the heavens and learn from them."

—Albert Einstein



Roundup Swap Shop

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

Property & Rentals

Sale: 2 waterfront lots on Lake Houston, Northshore subdivision, \$10,500. Owner will finance. 487-8633.

Lease: 3-2-2 Friendswood, formal DR, fireplace, large fenced yard, school close, no flooding, \$475/mo + deposit. 482-1127.

Rent: Beautiful townhouse along Dickinson Bayou. No flood waters, tennis courts, swimming pool, 3-2-2. 334-2309.

Sale: 3-3 townhouse, close to NASA, no flooding, \$32.50 sp. ft., total price \$52,000. X4005 or 482-3596.

Cars & Trucks

68 Corvette convertible, 427-390 hp 4 speed, A/C, AM/FM. Epps. x3035 or 488-0131.

17' travel trailer, A/C, refrig., sleeps 4, \$1200. 333-4374 or 332-4886.

77 Dodge van B-200, automatic, air, power, AM/FM stereo, uses reg gas, \$3600. Don. x4451 or 554-2882.

79 GMC 3/4 ton Sierra, V8, air, auto, P.S., brakes, radio, HD suspension, hitch, 9700 miles, exc cond, \$6150. 488-9005.

78 Chevy Bonanza 1/2 ton pickup, 14,000 miles, good cond, asking \$5150. 488-5789 after 5.

77 Dodge Santana vancamper, low mileage, deluxe interior, many extras, 400 mile range, must sacrifice. C. Bowser 486-4654 after 5.

78 Trans-Am, white/red vinyl, 400 cid, auto, stereo, mags, 9000 miles, like new, \$6200. Blucker. x3533 or 488-4188.

77 Camero, brown w/tan landau roof, AM/FM stereo, cruise control, tilt steering wheel, rally sport wheels. Nikki 473-5231 after 5.

72 Chevy truck, custom 10, V8, std shift, 2 barrel carb, \$1200. 946-1794.

72 Ford LTD station wagon, A/C, PS/PB, one owner, exc cond, Michelin tires, maintenance records, \$950. 488-3409.

73 Chevy C-10 s/2 ton pickup, AC-PB-PS, automatic. 471-0778 after 5.

Cars & Trucks

76 Chevy Monte Carlo, loaded, power everything, cruise control, steel belted, AM/FM/tape, vinyl roof (33000 miles), \$3495. 471-0778 after 5.

Camper shell for 1/2 ton pickup, fiberglass, \$275. 471-0778 after 5.

67 VW for parts, \$150, 68 Olds Delta Custom, 455 engine, runs good, best offer. Weyer. x7272 or 333-5585.

75 Tioga mini motorhome, generator, roof and dash air, stereo, self-contained, sleeps six, 43,000 miles, \$8900. Scott. x3278 or 554-6148.

76 Ford F250 camper special, XLT, 460 cu in, all accessories, a very strong truck in exc cond. \$3295. X3731.

77 Ford F150 Supercab, PS/PB, air, dual tanks, auto, 6 cyl. 44K mi, new tires, \$3500. Terrell X2437 or 481-1808.

Household Articles

Maple dining room set, table with extra leaf and 6 chairs (2 captain chairs), \$195. Living room or den chair with removable cushions, \$40. all nice 488-5564.

Herculan burnt orange and beige stripped couch and loveseat, \$250 or best offer. Two almost new large table lamps, \$70. Debbie. X4321 or 488-0852 after 5.

Walnut wood table 19w x 59 x 14 in, \$10. 488-5037.

Westinghouse washer (10 lb) and dryer (220) match set, gold, never used, \$400. 741-1795 after 6.

Sears metal office desk and swivel chair, 30" x 60" top, \$50. Bauch. 333-3382.

Early American furniture, sofa, rocker, coffee table, end table/lamp, etc. Gene. x4471.

Refrigerator with ice maker, \$220. Garage door opener, \$50. New D-14-78 tire with ring, \$25. Wood panels, 12" x 1", \$5/pc. 482-6609 after 5:30.

Bedroom suit, American of Martinsville, nice. 471-0778 after 5.

Lost and Found

Found: Carton of photographic equipment on sidewalk between Bldgs 12 and 30. Owner please identify. Hartman. x2191.

Wanted

Collapsible adult wheelchair. Herb Schultz x3103 or 471-1395 after 6.

Violin, will pay cash for good handmade full size violin. Gene. x4471.

Part-time flight instructors for Piper Warrior and Cessna 150 based at Houston's Gulf Airport. 946-1750.

Housing needed. Furnished room or apartment needed by medical student for January and February. x4021 or x5594.

Full size reg bed, very reasonable, possible exchange for single bed or trundle bed. Ruby. x4995 or 944-5944.

Boats and Planes

Hydrodyne Tournament ski boat and trailer, 220 hp. I/O \$2500. 487-8633.

Sailboat, 20' Gulf Coast 20 built 1972, fully equipped to sail. Two sets of sails, galvanized trailer, make offer. Malcolm Jones. x2394 or 471-3303.

Airplanes for rent: Cessna 150, \$17/hr wet or 4 place Piper Warrior \$26/hr wet. Instructor available for easy access and checkout. 946-1750.

16' Wellcraft, walk thru windshield, 50 hp Merc, elec start, tilt trailer, \$1750. x5169 or 333-2373.

Sailboat, 14' Dolphin, includes trailer, boat-cover and 4 ski belts, exc cond. Earl Rubenstein. x3116 or 334-2354.

Wellcraft 78 V20, 470 Mercruiser, SS prop, VHF, Exc, \$7600. 471-5396.

Stereos and Cameras

Phono-stereo with AM/FM radio, housed in 2 matching blond cabinets, only \$40. Earl Rubenstein x3116 or 334-2354.

FM/8 Track Jil underdash car stereo, 1 year old, exc cond, \$45. Beth x2691 or 332-4787.

Musical Instruments

Excellent student piano, cut down upright with mirror, \$350. Turquoise sofa, 83" with arm pads, exc cond, \$100. 946-1869.

Miscellaneous

Sears jogger, low mileage, \$50. ED. x5595 or 488-1262.

Wet suit, good quality for scuba diving, \$100. 487-8633.

14' boat-motor-tra w/acc. Two hiback van seats. Tow bar. Van bench. Two mag wheels Ford van. Lou x3346 or 486-0804.

1/2-cord oak firewood, \$45. Fireplace grate and tools, \$25. Dobson x4236 or 482-4600.

Trade two exc GR70-14 WW tires for 13 or 15 inch non-radial tires. 481-1469 after 6.

3-rail motorcycle trailer, Little Dude make, \$75. Glenn x2386.

Airline pet shipping cage for medium size dog, \$60. 482-7332.

Old style Friden electric printing calculator, ideal for small business where printed receipts are required, \$15. Kilbourn x4402 or 482-7879.

Camping tent, interfaces with VW campmobile or stands alone, like new, \$50. Fullerton x2321 or 488-5782.

What's cookin' in the cafeteria

Week of January 28 - February 1

Monday: Chicken & Rice Soup; Texas Hot & Beans; BBQ Ham Steak; Steak Parmesan; Beef & Macaroni (Special); Green Beans; Carrots; Au Gratin Potatoes. Standard Daily Items: Roast Beef; Baked Ham; Fried Fish; Chopped Sirloin. Selection of Salads, Sandwiches & Pies.

Tuesday: Tomato Soup; Potato Baked Chicken; BBQ Spare Ribs; Mexican Dinner (Special); Squash; Ranch Beans; Spanish Rice; Broccoli.

Wednesday: Clam Chowder; Baked Turbot; Liver & Onions; BBQ Ham Steak; Baked Meatloaf w/Creole Sauce (Special); Beets; Brussels Sprouts; Green Beans; Whipped Potatoes.

Thursday: Beef & Barley Soup; Chicken & Dumplings; Corned Beef w/Cabbage; Smothered Steak w/Cornbread Dressing (Special); Spinach; Cabbage; Cauliflower Au Gratin; Parsley Potatoes.

Friday: Seafood Gumbo; Pork Chop w/Yam Rosette; Creole Baked Cod; Tuna & Salmon Croquette (Special); Brussels Sprouts; Green Beans; Buttered Corn; Whipped Potatoes.

Week of February 4 - 8

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

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; 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.

Apollo-Soyuz commemorative stamps issued in 1975. 4 sheets for \$12. Jeff Sugano x7429.

Several new guns, hard to find Ruger, Smith, Colt, Browning. Serious only. 488-1846 eyes.

Two pair used ski boots, men size 10 med, Koflach, \$20; women size 7B, Henke, \$20; one men's black ski pants size 36R, \$5. x4366 or 471-1914.

Firewood, delivered, Oak - \$120, Pine - \$80. Jean x4017 before 4. Call collect after 7 p.m. (or 1+) 588-2811 ask for John or firewood.

Mags, set, w/13 inch tires like new, for Pinto, etc., four lug hole, used four months, \$400 value for \$150. Ray 944-4116.

Wards 3-hp rotary mower, recently tuned, 22-in blade, exc cond, \$40. Ed 333-4119.

Several Avon bottles. 946-4013 after 5:30.

Air stapler (for roofing) Sencomatic PQ \$175; Travel trailer A/C, frigidating 12,000 BTU, \$250; Calculator TI SR52. card programmable, \$75. Schroeder x6450.

Motorcycle trailer. Holds three bikes, \$195. Sears trailer hitch, fits most 78-80 GM intermediates, \$15. Hutchins x 5886 or 482-5607.

Cycles

Honda 350, 1971, needs repair, \$150. 487-8633.

75 Honda DB 350T cycle, needs some work, \$475. Doherty x4039 or 488-0182.

76 Kawasaki KH500, 3200 miles, runs great, extras. 332-8219.

Carpools

Ride needed from JSC to University of Houston, Central Campus Tuesdays and Thursdays around 3 p.m. Katherine Douglas x5185.

Carpool members wanted, north of 517, Dickinson, to JSC, 8-4:30, Janice x6341.

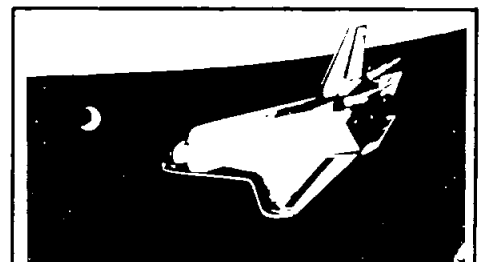
Join carpool from SW Houston (Chimney Rock and Braeswood) to JSC 7:30-4, 774-4321.

Want to form carpool from Glenbrook Valley/Hobby Airport area to JSC, 7:30-4. Foster x2041.

Need carpool from Westheimer-Hillcroft area to NASA, 7:30-4 shift. Ext. 5291 or 974-1156. Randy

Personals

Anyone witnessing an accident on December 5, 1979, in the parking lot west of Bldg. 45, involving a 1979 Pontiac Grand Prix please call Marie Nolan x 6251.



The Roundup is an official publication of the National Aeronautics and Space Administration Lyndon B. Johnson Space Center, Houston, Texas, and is published every other Friday by the Public Affairs Office for all Space Center employees.
Editor Kay Ebeling



Arthur Moody



Robert Stewart



Bennie Moody above, Robin Ofbolt below



Johnny Briscoe, below, and at right, Elaine Sowell



Jessie Rollins

TRAFFIC GUARDS

Every day, as the sun rises, as the sun sets, cars filter in and out of JSC's parking lots. There's hardly ever a stack up or congestion. The reason: the deft movements, quick judgment, and dependability of JSC's traffic guards some of whom are featured here, keeping the traffic flowing.

Photos by Susan McCown



Economic Spinoffs From Page 1

"In other countries where communications satellites are run by government it still takes hours to place a long distance phone call."

COMSAT profits are financially strong, and the stock is public. Operating revenues (money back from investment) reached \$184,570,000 in 1978, up \$16,383,000 from 1977. This increase came from growth in communication traffic, in spite of reduced rates required by the Federal Communications Commission in 1978.

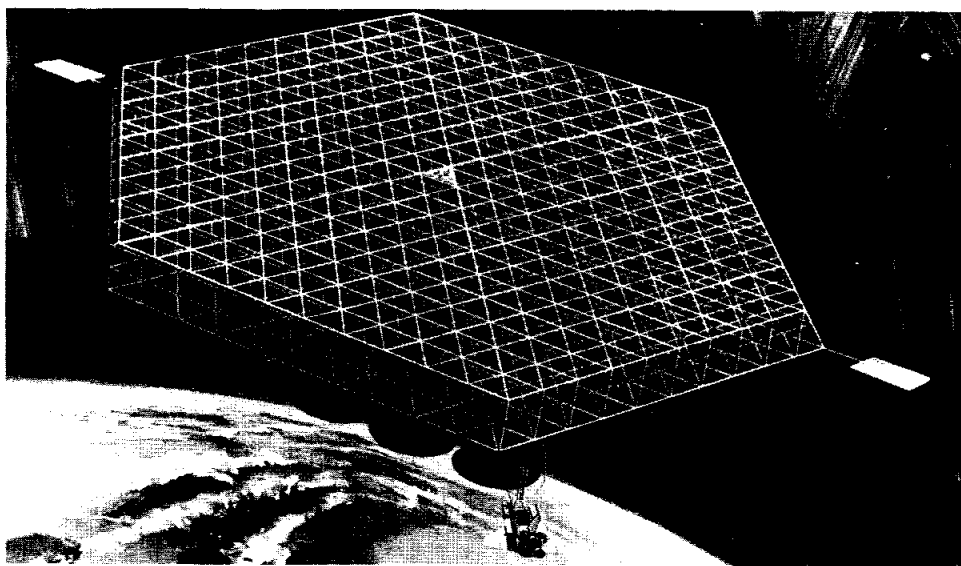
And COMSAT is not a monopoly. At hearings before the FCC in 1972, two options were debated: to have the government run the communications satellite series, or to "open the skies," allowing anyone who wanted to fly a satellite to fly a satellite, with NASA monitoring, of course.

The second option won, and the industry now has Western Union, RCA, and Satellite Business Systems competing with COMSAT for ideas as well as air space.

All this came about because rocket teams wanted to go a little farther into space, to see if they could send an object around the globe and then put it to use—just to see what would develop.

The Space Shuttle is an engineering marvel. It is complex, diverse; it "goes where no man has ever gone before." Some critics ask, "Why?" and some Shuttle workers are hard put to answer.

There are vague replies: "We can only speculate on the benefits to come from it. Mankind needs new horizons. Once we get there, whole new worlds will open up.



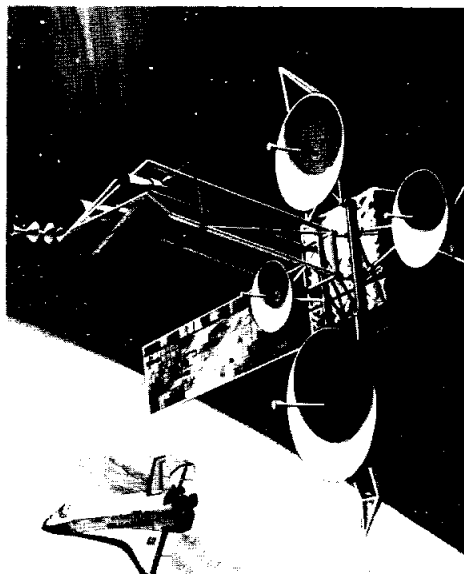
Above and at right, 1978 theme art of communications satellites of the future

It's a spaceship, for heaven's sake, use your imagination."

The taxpayer may raise an eyebrow. But who would have thought in 1960 that the first Pioneer would grow into the multi-million dollar industry it is today?

"History is the story of the defiance of the unknown and of what happens when man tries to extend his reach."

—Norman Cousins



Launches for 1980

Kennedy Space Center's light launch schedule for 1980 reflects the transition to use of the Space Shuttle. Besides the Orbiter's first flight, only five satellites will be launched.

First will be FLSATCOM-C which will provide instant communication for U.S. military units throughout the world. The Solar Maximum Mission is scheduled for launch in January or February. It will study the period of intense solar activity coming in the next few years.

In August the Geostationary Operational Environmental Satellite-D will be launched to collect meteorological and oceanographic data for NOAA, and the concluding two scheduled missions will carry Intelsat-V satellites.



A Delta Rocket will launch the Solar Max mission in the coming weeks