

Space News Roundup

Vol. 20 No. 23

December 7, 1981

National Aeronautics and Space Administration

Engle and Truly recall orbital odyssey



Large cumulus clouds obscure the high volcanic mountains of Guatemala and Mexico in this view taken from Columbia during STS-2. Commander Joe Engle described the view as "a meteorologist's delight," noting that it showed several cloud types and some complex formations. "It was fascinating to watch these cloud systems develop," Pilot Richard Truly said.

They were exuberant, they cracked jokes and even waxed poetic at times, and if one thing stood out in the STS-2 post-flight press conference, it was that Commander Joe Engle and Pilot Richard Truly found the weightless environment of space much to their liking.

"That's the part that sure beats working for a living," Truly said.

During the press conference Nov. 30 in Teague Auditorium, both astronauts described the onset of gravity during reentry as something which took a great deal of getting used to.

Truly said he had planned to take pictures of the California coastline as Columbia swooped in from the Pacific on reentry, and as he did so he readily noted the heavy tug of gravity. He described lifting the camera up to his window as something akin to hefting and focusing an anvil.

"Everything was perfectly normal except for the 350 pound person sitting on my shoulders," he said.

Engle, for his part, said he could not get used to objects staying where they were placed once he got back on Earth. At one point, he recalled, when he and Truly were showering after the landing at Edwards Air Force Base, Truly asked Engle to pass him a towel. Engle said he picked one up and without thinking began to float it to Truly. Then he remembered that bothersome state known as gravity and heaved the towel, but it still fell short.

Asked by one newsman what people could expect when space becomes more and more accessible, Engle replied, "You're going to have a ball."

Displaying a broad working knowledge of Earth, its life and its landforms, Engle and Truly took the 400 persons in the audience along with them on a review of their 54-hour odyssey. In so doing, they touched on such diverse topics as continental drift and plate tectonics, airline traffic routes over Italy, lightening storms over South America as viewed from orbit, and a breeding spot for gray whales in a bay off the Gulf of California.

With video tape, 16 millimeter film and still photographs flashing on a screen beside them, the STS-2 crew recounted the launch, orbit and landing phases of the mission in some detail. Truly said the liftoff Nov. 12 resulted in some vibrations being felt in the spacecraft, but overall, he said, "it was really smooth."

Engle compared the launch vibrations to "driving over a really rough railroad track, but not so bad that you couldn't read the displays." And both astronauts described Columbia's roll maneuver for the "heads down and outbound" configuration as very smooth and precise.

Their descriptions of the roll maneuver were punctuated by some particularly spectacular footage Truly shot from his window, with Florida whizzing away

(Continued on page 2)

And now, STS-3

Lousma and Fullerton named prime crew for third flight test

Astronaut Office Chief John W. Young bounded to the stage near the close of the STS-2 post-flight press conference with a large brown envelope in his hand, and asked Marine Col. Jack R. Lousma and Air Force Col. Charles Gordon Fullerton to step forward.

With the STS-2 crew looking on, he presented Lousma and Fullerton with the ceremonial keys to *Columbia*, and formally announced their selection as the prime crew for STS-3, now scheduled for sometime in March, 1982.

When presented with the keys, Lousma looked over his shoulder at STS-2 crew Joe Engle and Richard Truly and asked, "I'm wondering where the slip is for the 900,000 mile oil change—have you guys got it?"

Lousma, selected as commander for the next flight, is a veteran of Skylab 3, during which he logged over 1,427 hours in space from July to September, 1973. Fullerton, selected as pilot for STS-3, was also the pilot during the first, third, and fifth flights of the Space Shuttle *Enterprise* during the Approach and Landing Test Series in 1977.

Lousma was born Feb. 29, 1936 in Grand Rapids, Mich. He received a bachelor of science degree in aeronautical engineering from the University of Michigan in 1959 and the degree of Aeronautical Engineer from the U. S. Naval Postgraduate School in 1965. He was presented an honor-

ary doctorate of astronautical science from the University of Michigan in 1973.

He has been awarded the JSC Certificate of Commendation, the NASA Distinguished Service Medal, the Navy Distinguished Service Medal and the Robert J. Collier Trophy for 1973, as well as other awards, including the AIAA Octave Chanute Award for 1975. He has logged over 5,400 hours of flight time, with about 3,600 in jet aircraft and 240 hours in helicopters.

Lousma was one of the 19 astronauts selected by NASA in Group 5 in April, 1966. Besides his assignment as pilot for Skylab 3, he also served as a member of the astronaut support crews for the Apollo 9, 10 and 13 missions. He also served as backup docking module pilot for the Apollo-Soyuz Test Project.

He is married to the former Gratia Kay Smeltzer of Ann Arbor, Michigan, and they have four children, Timothy, Matthew, Mary and Joseph Lousma.

Fullerton, selected as pilot for STS-3, was born Oct. 11, 1936, in Rochester, New York. He received bachelor of science and master of science degrees from the California Institute of Technology in 1957 and 1958, respectively. He has been presented the Air Force Distinguished Flying Cross, the NASA Exceptional Service Medal, the General Thomas D. White Space Trophy for 1977 and the Iven C.

(Continued on page 2)



The accelerated final phases of training now begin in earnest for Commander Jack Lousma and Pilot Gordon Fullerton, who recently were named the prime crew for STS-3. They are shown here practicing in a simulator at JSC. The backup crew for STS-3 will be Navy Capt. Thomas K. Mattingly II and Henry W. Hartsfield, Jr.

Bulletin Board

Procedural changes made at JSC Clinic

Effective immediately, several procedural changes have been made at the JSC Clinic. Second part visits for the annual health screening examinations will be scheduled throughout the day. In the past these examinations have been slated for early mornings and afternoons. Another change will be in the handling of treadmill tests for civil service employees, which now will not be offered to those under the age of 40. In the past these tests have been offered to all civil service employees once every three years. In addition, the Clinic has begun limiting non-occupational and non-critical visits to the hours of 10 a.m. to noon, and 3 to 4:30 p.m. In the past drop-in visits during all hours of operation were the practice. Emergency care will continue to be provided during all hours of clinic operation. The changes are being made in order to provide the current level of services with a reduced staff.

Rockets tickets available at Exchange Store

A limited number of tickets for the Houston Rockets—Phoenix Suns game Dec. 15 are on sale at the Bldg. 11 Exchange Store. The price is \$3, which includes parking fees. Game time is 8:05 p.m. Dec. 15 at the Summit. Also on sale at the Bldg. 11 Exchange Store are the following offerings: Plitt Theatre tickets, \$2.25 each; General Cinema tickets, \$2.40 each; Entertainment '82 coupon books, \$17.50 each; Gold C Values coupon books, \$5 each; and 20 cents postage stamp books, \$4 each.

Diets and Holiday eating to be discussed

Hints on special diets and how to enjoy holiday eating will be offered at the JSC Clinic's Health Education Program Dec. 16. A registered dietician will be on hand to discuss caloric, cholesterol and sodium content diets. A slide show and hand-outs will also be featured. The discussion begins at 1 p.m. Dec. 16 in the Bldg. 30 auditorium.

EAA sponsoring Indian dance performance

For millennia, dance has been an important part of the culture of India, and next week the Employee Activities Association is sponsoring a performance where employees, contractors and guests can see why. The Krishen Trio Dancers, along with other performers of Indian origin who live in the Houston area, will display their talents beginning at 6:30 p.m. Dec. 12 in the Olin Teague Auditorium. These highly symbolic dances, viewed with great respect in India, have endured for centuries, and express such spiritual concepts as divinity and universal truth. The program is free, and refreshments will be served. For more information, contact Dr. Kumar Krishen at x4561, or Lois Miller at x6267.

Astronomy Brown Bag seminars scheduled

Two noon meetings remain in the December schedule of the Astronomy Brown Bag seminar group. The seminars, held every Wednesday from noon to 1 p.m. in Room 193 of Bldg. 31, are open to interested JSC employees and contractors. The Dec. 9 meeting will be an open discussion which may include a review of the panel, "Man's Future in Space," which convened at the MysteryKon science fiction convention in Houston Nov. 28-29. The Dec. 16 meeting will feature JSC's James Oberg, who will discuss his latest book, *New Earths*, a review of present knowledge about "Terraforming," or engineering planetary atmospheres and climates to resemble that of Earth.

Orchestra Christmas concert planned

The University of Houston at Clear Lake City Community Orchestra will perform selections from Handel's Messiah and other traditional Christmas favorites during the Christmas Pops Concert beginning at 8 p.m. Dec. 12 in the UH/CLC Auditorium. Tickets are on sale to adults for \$3 and to students and senior citizens for \$1. For more information, contact W. F. Meek at x4851.

AIAA to honor STS crews

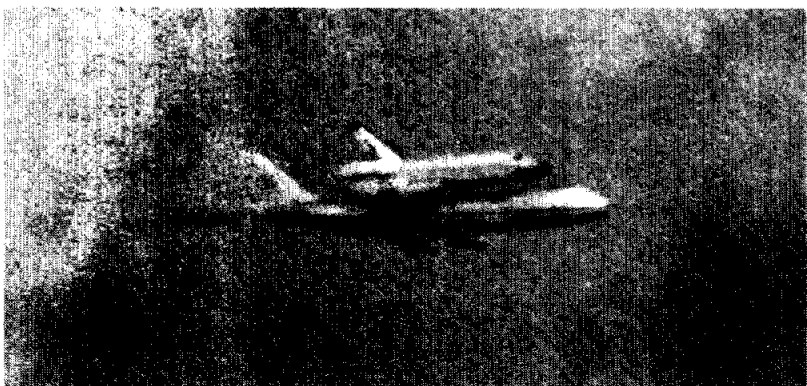
The JSC chapter of the American Institute of Aeronautics and Astronautics will pay tribute to present and future Space Shuttle astronaut crews during a reception from 5 to 7 p.m. Dec. 16 at the Gilruth Recreation Center. Astronaut Robert Crippen will be the honored guest. The reception will feature a slide show and a background presentation on Space Shuttle activities. Members and guests are welcome.

EAA Christmas parties are this week

This year's EAA Christmas parties will be held Dec. 12 and 13, and will feature a roast beef dinner the first night, prime rib the second night, and two bands on both evenings. A social hour will be observed before both dinners, with dancing starting later at 9 p.m. The cost for the roast beef dinner on Dec. 12 is \$13.50 per person, and the cost of the prime rib dinner Dec. 13 is \$18.50 per person. Both night's festivities begin at 7 p.m. For more information, call the Gilruth Recreation Center at x3944.

Blood drive scheduled for tomorrow

The third JSC sponsored blood drive of 1981 will be held at the Gilruth Recreation Center from 8:30 a.m. to 4 p.m. Tuesday. A donation of one pint insures the donor and his or her immediate family of any blood services required for one year. To make an appointment for tomorrow's blood drive, call Rachel Windham, x6493, Helon Crawford, x3159, Jim McBride, x6226, or just drop by the Gilruth Rec Center during the day.



Columbia, atop its 747 carrier aircraft, flew over JSC, or rather, north of JSC, on the way from California to Florida. Large numbers of JSC and contractor employees turned out to see the sight, but clouds and the 747 flight path afforded only a brief glimpse of the Orbiter.

Engle and Truly

(Continued from page 1)

and the sky color progressing through darker and darker stages of blue until finally it was black, and two stars could be seen rising above Earth's limb.

Other footage not widely seen before included shots of the payload bay doors opening on orbit, and of a sequence which showed separation of the external tank and different slow motion views of the ascent from the Launch Pad 39A at the Kennedy Space Center.

In discussing the orbital tasks which were completed, Engle said they were able to accomplish "90 to 95 percent of our goals, depending on which bean counter you talk to." Truly noted that all

but six feet out of 36,000 feet of film carried aloft for use in the Shuttle Imaging Radar was used, and that over 850 conventional photographs were taken of Earth.

Truly said most of the Earth photos were taken during the periods allotted for sleep time. "One problem with sleeping," he said, "was that if you woke up that was it for the next hour or so. On a two-day mission, we figured we could sleep when we got home." He said he slept in the pilot's couch on the flight deck, while Engle opted to tape or velcro himself to the deck.

Truly said his one regret was not being able to fully accomplish the orbital observations of lightning, an experiment which had to be

put on the back burner due to higher priority activity plans like testing the Remote Manipulator System. But he and Engle also registered some disappointment in having to shorten the flight in the first place. "We figure somewhere along the line the system owes us three days," Truly said with a broad grin, "and maybe we'll get our chance."

Near the end of the press conference, a reporter asked if the mission had proven the Shuttle's ability to act as an orbital military platform, and what types of things the crew might have noticed and passed on to the military. "The thing I noticed," Truly said, "is that there weren't any borders." The auditorium rocked with spontaneous applause.

STS-3 prime crew

(Continued from page 1)

Kincheloe Award from the Society of Experimental Test Pilots, of which he is a member.

He graduated in May, 1965 from the Air Force Aerospace Research Pilot School at Edwards Air Force Base and shortly thereafter reported to the Aeronautical Systems Division at Wright Patterson Air Force Base. He was a test pilot there for the bomber operations division when notified of his selection to the Air Force's Manned Orbiting Laboratory Program. He has over 9,000 hours of flying time, and was selected by NASA as an astronaut with Group 7 in September, 1969. He served as a member of the astronaut support crews for the Apollo 14 and 17 missions.

He is married to the former Jarie J. Buettner of Delphos, Ohio, and they have two children, Molly Marie and Andrew Alexander Fullerton.

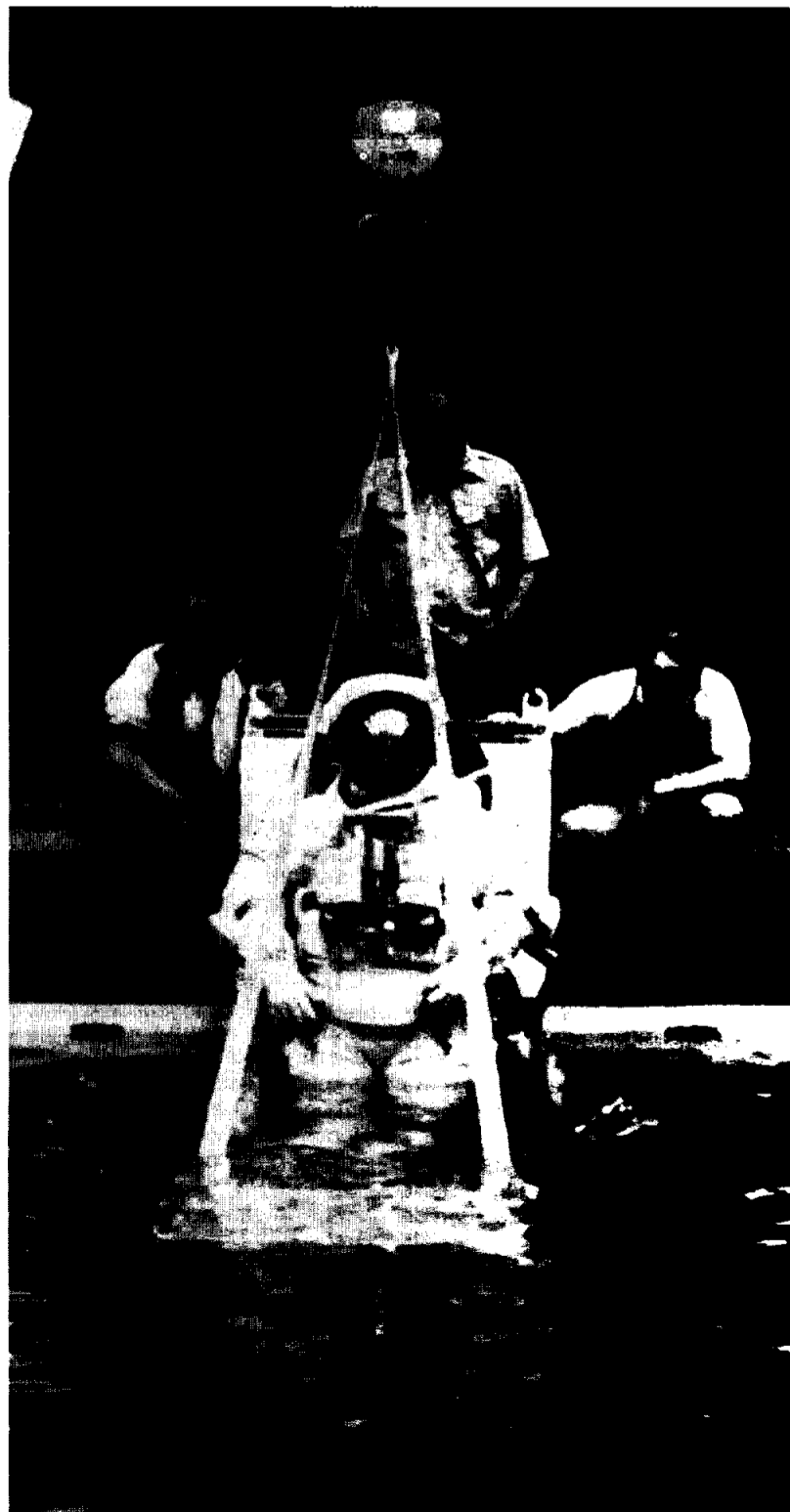
The mission they will fly is the third orbital flight test of the Space Transportation System. It is scheduled for 116 orbits of Earth during the seven-day, three-hour flight. While one of the prime objectives of STS-2 was to test *Columbia's* aerodynamic performance on reentry, a prime goal of STS-3 will be to test the spacecraft's thermal characteristics on orbit. As part of this testing series, *Columbia* will be flown for 30 hours in a tail to sun, top to space configuration, followed by 80 hours with nose to sun, and 26 hours with payload bay to sun. These configurations will be preceded and followed by 10 hours each of the "barbeque mode," or the

Passive Thermal Control mode, in which *Columbia* will be rotated to present top and bottom to the heat of the sun side and the cold soak of the shadow side.

Columbia will also carry aloft a space observational (as compared with the Earth observational STS-2 payload) payload known as OSS-1, for the NASA Office of Space Science payload one. *Columbia* will also carry a Getaway Special and will have an increased payload weight over STS-1 and 2, and will experience a higher as-

cent dynamic pressure.

One of the many television sequences now in planning for the flight includes an attempt to film the forward Reaction Control System (RCS) firing. Young has previously described the firing of the forward RCS jets as "sounding like a muffled howitzer going off, with a blue flame shooting out about 40 feet." Television planners hope to be able to capture the same sort of sight if they are able to focus cameras on the system.



Taking the plunge into the spotlight of the Weightless Environment Test Facility is Astronaut Jack Lousma, who last week was formally designated commander for STS-3. Lousma is shown being lowered by hoist into the water, where he worked with a mockup of a Space Shuttle payload bay structure recently.

Space News Roundup



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

Editor..... Brian Welch

Houston site, Roundup embark on 21st year

The announcement came in September, 1961, four months after President John F. Kennedy had committed the nation to sailing a "new ocean" and landing men on the moon before the decade ended.

For several months, personnel with the Space Task Group (STG) had heard persistent rumors that they would be relocated from the east side of the Langley Research Center in Hampton, Virginia to another location specifically dedicated to the tasks ahead. Some thought the new center under construction in Beltsville, Maryland would become the headquarters of STG, while others believed the rumors that a new Manned Spacecraft Center would be located in Houston.

On September 19, 1961, NASA Administrator James E. Webb made it official. STG would be redesignated as the Manned Spacecraft Center, and would be relocated on a 1,000-acre tract southeast of Houston donated to the government by Rice University.

Twelve days later, still with a dateline of "Langley AFB, VA" Volume 1, Number 1 of a new NASA publication was issued. It

was called the **Space News Roundup**, and with this issue, the paper enters its 21st year.

According to "This New Ocean," the official history of the Mercury Project, officials with STG reacted quickly to the announcement. "The very next day they flew into Houston to begin a search for an estimated 100,000 square feet of temporary floor space. Moving began in October 1961, when Martin A. Byrnes, as the local manager, and a small cadre of center operations, procurement, and personnel employees opened offices in Houston's Gulfgate Shopping City."

By the summer of 1962, operations were dispersed among 11 locations, taking up 295,996 square feet of leased facilities in the area. By this time, STG personnel had received their permanent change of duty station directions, and the Manned Spacecraft Center was considered the new nerve center of the accelerated program to put men in space. Astronauts Alan Shepard, Virgil Grissom, John Glenn and Scott Carpenter had already been in space.

The lead story of that issue, edited by Ivan D. Ertel, was topped by a bold headline which read, "STG Renamed; Will Move—Manned Spacecraft Center to Have Texas Home." Inside was a two-page spread of photographs of the Houston area, featuring such shots as a Texas City swimming pool, a garden scene in Houston, the physics laboratory at Rice University, and the elementary school in Dickinson.

Another story in that premiere issue listed the 150 names which had been suggested by STG personnel, and which by a process of elimination were finally whittled down to the **Space News Roundup**. The winning entry was submitted by Phonicille De Vore, then with the Office of the Director of STG, Robert Gilruth.

Among the suggested names were: *Apollo Apothegems, New Frontiers, Moon Memos, Big Star, Celestial Times, Cat and the Fiddle, Das Capsule Fingenabout Propagandischer Blatt, Eyes and Ears of Space, File 13, Green Cheese Gazette, Man Upstairs, Space Sanskrit*, and perhaps the most descriptive, *All about the Moon People*.

Space News Briefs

Spacelab flight article due at KSC

The Spacelab flight article, due to be launched aboard the Space Shuttle in September, 1983, is on the way to the United States and will arrive at the Kennedy Space Center this month. NASA will formally accept the advanced space laboratory in a ceremony Jan. 18, 1982. The European Space Agency (ESA) this week held acceptance ceremonies of its own, as the spaceworthy habitable module was received from ERNO, the West German prime contractor. ESA is providing the first Spacelab system, which consists of a core segment, an experiment segment, an access tunnel and pallets such as the one on which the OSTA-1 payload flew on STS-2. Spacelab has been under development since 1973, when a memorandum of understanding between NASA and ESA was signed. NASA currently plans to buy a second Spacelab system, probably by 1984.

SATCOM III-R boosted to GEO

SATCOM III-R, successfully launched from the Kennedy Space Center at 8:38 p.m. EST Nov. 19, is now stabilized in Geosynchronous Earth Orbit (GEO) and should begin operations sometime in January. The \$65 million RCA communications satellite, which will become the primary workhorse of the cable television industry, was launched atop a Delta rocket and will orbit Earth 22,300 miles above the equator just off the west coast of South America. The satellite replaces the original SATCOM III, which lost contact with ground controllers while being boosted from transfer orbit to GEO in 1979. RCA spokesman Nick Pensiero said a special committee consisting of NASA, RCA and Air Force investigators could deduce no single reason why the satellite telemetry ceased as it was being boosted to GEO. "It could be that it went into a bad orbit," Pensiero said, "or it exploded, or it went into a spin that eventually caused it to reenter. All we know for sure is that there is no trace of it." One impact of that loss still being felt is the tight insurance market for satellites, following the payment of \$77 million to RCA after SATCOM-III disappeared.

Quito tracking station ceases operations

After a quarter century of service, the Quito tracking station atop Mt. Cotopaxi in Ecuador ceased operations as the STS-2 crew prepared for reentry Nov. 14. Budget reductions prompted the closure, and phasing out of personnel had been underway for about six months, according to a Goddard Space Flight Center spokesman. The Quito station began service in 1956, as one of the first in a series of worldwide tracking facilities for the Explorer satellite program. Quito also served as a loop in the communications belt for the Mercury, Gemini, Apollo and Skylab programs. Equipment from Quito, as well as from the Tula Peak, New Mexico station which also is closing, will be transferred to Dakar, Senegal. The Dakar station, located on Cape Verde, the easternmost point on the African continent, will be upgraded, the spokesman said. Astronauts Joe Engle and Richard Truly thanked Quito operators for their help during one of their last orbits before reentry. NASA personnel at the Quito station will be relocated. The closure will result in a \$4 million annual savings.

Boeing awarded SRB-X study contract

The Boeing Aerospace Co. of Seattle has been selected by the Marshall Space Flight Center to prepare a study of possible configurations for an unmanned launch vehicle to augment Space Transportation System operations. The vehicle, presently identified as the SRB-X, would consist of Solid Rocket Boosters strapped together for a primarily recoverable system capable of boosting a 10,000-pound payload into Geosynchronous Earth Orbit. The \$250,000 fixed-price contract will fund a two-phased Boeing study into possible configurations and operational capabilities of the proposed system, which could be operational in this decade.

Martian spring underway, Viking reports

A "fairly placid" spring is underway on Mars, according to the Jet Propulsion Laboratory, with balmy temperatures of -81° F at sunrise and -24° F reported during the late afternoon of Nov. 5. The atmospheric pressure that day was 7.8 millibars, and additional information from the Viking 1 lander indicates the northern polar cap of Mars is retreating with the advent of Spring. The lander nominally transmits data to Earth once each week. Both the Viking 1 and 2 Orbiters and the Viking 2 lander have been shut down.

Earth "catches up" to Voyager 1

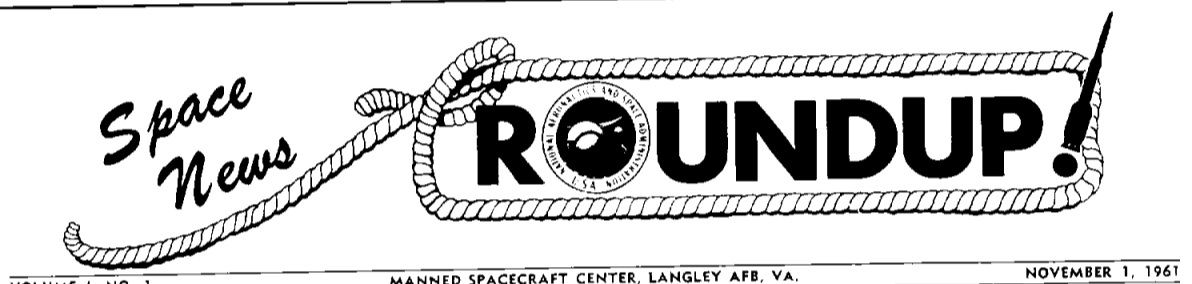
The Voyager 1 spacecraft, now 280 million miles above the ecliptic as it races out of the solar system, is 1,157,601,923 miles from Earth today. On Friday, Voyager 1 was 1,159,043,166 miles from Earth. The reason for that seeming discrepancy: Earth's orbital velocity of 66,000 miles per hour, compared with Voyager's heliocentric velocity of 45,000 miles per hour, means the planet "overtook" the spacecraft somewhat during the weekend, and actually is about 2 million miles closer today than it was Friday.

Founder of Space Services Inc. to speak

David Hannah Jr., founder of Space Services Inc. and the private enterprise Percheron Rocket project, will speak at the Houston L-5 Society meeting at 7:30 p.m. Dec. 11 in the Pacific Room of the University Center at the University of Houston. Space Services is the first private enterprise attempt to place payloads in orbit. The first test rocket, built for \$1.2 million, exploded during the initial launch attempt earlier this year, but another Percheron is under development and is scheduled for testing in about 18 months.

Galileo hardware components well along

Most of the hardware components for the multi-orbit Galileo mission around Jupiter have been manufactured and were in component or subassembly tests as of Dec. 1. So far about \$300 million has been spent on the project, nearly half of the estimated costs of the program. Although budgetary constraints continue to place the project in some degree of doubt, work is progressing on the basis of Space Shuttle/Centaur upper stage launch in 1985. Jupiter arrival is scheduled for early 1987. The orbital mechanics of the Galileo Orbiter mission are among the most, if not the most, sophisticated "cosmic billiard game" yet devised. Each pass by a major Jovian moon will use that satellite's angular momentum to achieve a new elliptical orbit. This method will allow close approaches (within 200 kilometers) encounters of all the four major moons, Io, Europa, Callisto and Ganymede, and nearby encounters with all of the lesser moons. In addition, a probe will be launched from the orbiter which will penetrate the Jovian atmosphere, and is expected to survive to a depth of at least three Earth atmospheres, and perhaps as many as seven atmospheres.



VOLUME 1, NO. 1 MANNED SPACECRAFT CENTER, LANGLEY AFB, VA. NOVEMBER 1, 1961

STG Renamed; Will Move



Manned Spacecraft Center To Have Texas Home

Recent changes affecting Space Task Group include the September announcement of the move to the Houston, Texas, area and the redesignation of STG as Manned Spacecraft Center.

Manned Spacecraft Center personnel have opened offices in the Gulfgate Shopping City in Houston under the direction of Martin Byrnes, Site Manager in the approximate 500 square feet of floor space donated for the purpose of the Gulfgate management. MSC will have a continuing operation there until space can be used and made ready for occupancy according to the Site Procurement Contract. The move operations being conducted at the Gulfgate offices are largely concerned with procurement, personnel, and public affairs.

MSC personnel who have been in the area since their shuffling back and forth between Langley and Houston, have held many meetings with various Chambers of Commerce, Realtors, and other groups.

The meetings with the Chamber and Realty groups have resulted in MSC personnel receiving much needed information relative to existing schools, recreational and other facilities which will be available to personnel transferring from Langley to the Houston area. Further, these groups have been made aware of the MSC requirements on housing, schools, etc.

The people of the Houston area have literally welcomed MSC personnel with open arms and have offered complete cooperation in all facets of the operation.

Typical of the pace of activities is the number of visitors and sales.

(Continued on page 5)

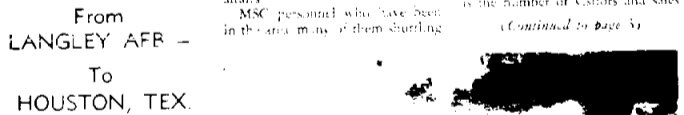
Holmes Takes Over MSF Office Today

Dr. Bernard Holmes, RCA executive and electrical engineering expert is scheduled to assume duties today as Director of Manned Space Flight Programs. The appointment was announced in September by James E. Webb, space agency administrator.

Holmes visited Manned Spacecraft Center October 6 and was briefed by MSC Director Robert R. Gilruth and members of his staff. Following the briefing he visited MSC's portion of the display which had been prepared for Open House October 7.

For the past three and one-half years he has served as RCA's Project Manager of the Ballistic Missile Early Warning System (BMEWS). In his new job he will be responsible for direct program supervision of NASA's accelerating and expanding manned space flight activities.

(Continued on page 2)



From LANGLEY AFB - To HOUSTON, TEX.



GILRUTH SPEAKS AT ARS MEETING

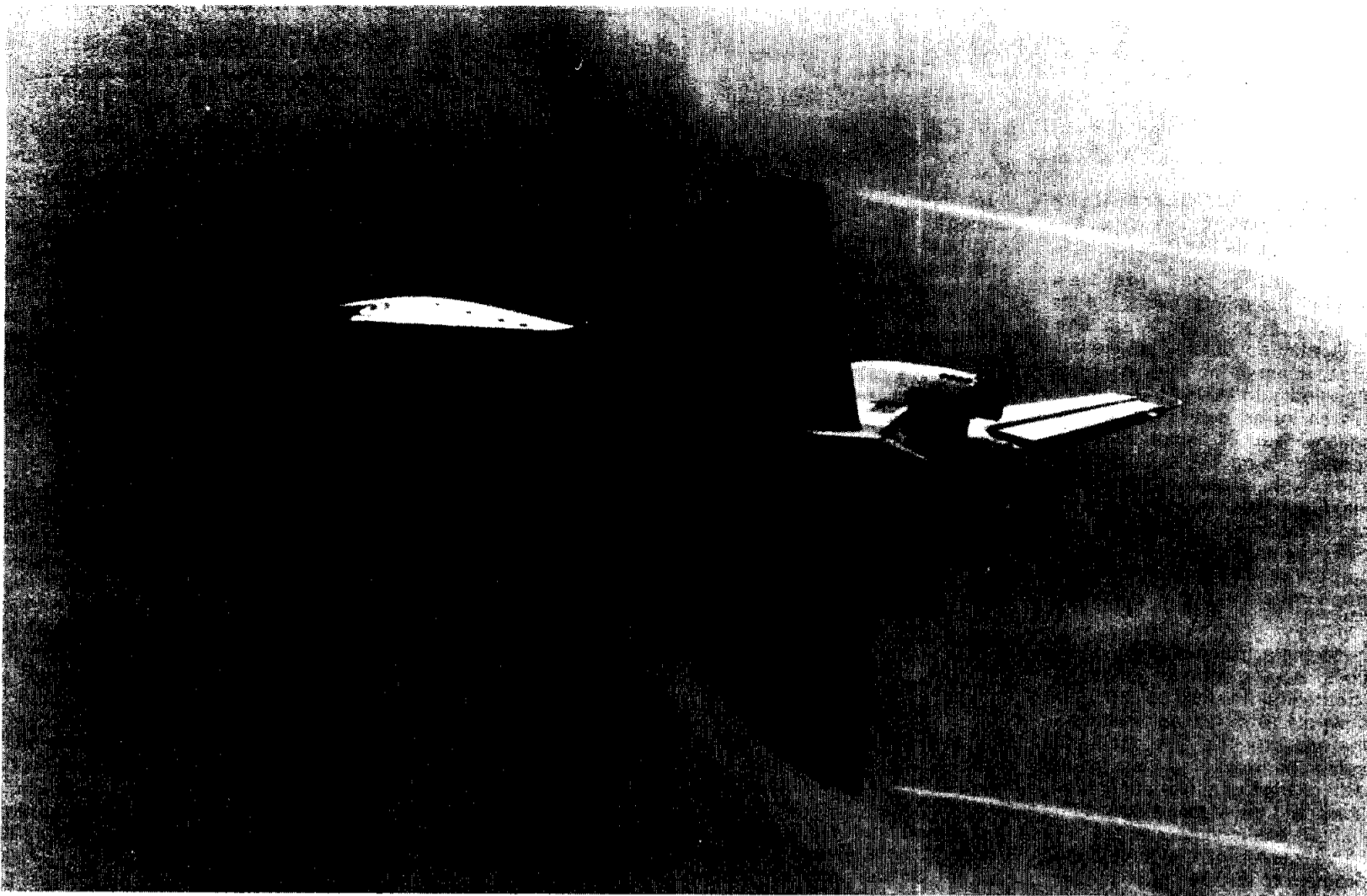
Robert R. Gilruth, Director of Manned Spacecraft Center speaking in New York City October 22 during the American Rocket Society Space Flight Report to the Nation reviewed the progress of Project Mercury and outlined future manned space flight plans.

Speaking of the current status of Mercury, Gilruth said, "We are approaching the end of the development. During the next 12 months we will complete the development of the Mercury program. The challenge presented by the project was to:

- First, investigate man's capabilities in the space environment;
- Second, and concurrent with the first, develop manned space flight technology for use as a basis for the conduct of much more ambitious undertakings in the long manned exploration of space and the planets.
- Continuing, he pointed out seven of the major accomplishments achieved during the past three years.
- The development and expansion of a solid management capability for the conduct of manned space flight research activity.
- The selection and verification in flight of the design of the Mercury spacecraft.
- The selection of a family of launch vehicles with which to carry on the flight program.
- The development and expansion of industrial know-how and capacity for the design and manufacture of very complex spacecraft and related systems.

(Continued on page 5)

It was 1961 and two Americans, astronauts Alan Shepard and Virgil "Gus" Grissom, had been rocketed into space by the time the first issue of the **Space News Roundup** was published. At that time, November, 1961, most of the Space Task Group was still quartered on the East Side of the Langley Research Center in Hampton, Virginia. The earliest of the NASA centers, begun in 1915 as the first laboratory of the old National Advisory Committee for Aeronautics, Langley shared grounds with Langley Air Force Base, thus the dateline beneath the **Roundup** logo.



This view of the Space Shuttle *Columbia* was made with a hand-held 70mm camera in the rear station of a T-38 chase plane during the approach for landing Nov. 14. Mission specialist/astronaut Kathryn D. Sullivan exposed the frame as

STS-2 crew Joe Engle and Richard Truly guided *Columbia* to an unpowered landing at Edwards Air Force Base, Rogers Dry Lake. Vapor trails streaming from the trailing edges of the wings attest to *Columbia's* speed on approach.

Cookin' in the Cafeteria

Week of December 7-11, 1981

Monday: Cream of Potato Soup; Franks & Sauerkraut; Stuffed Pork Chop; Potato Baked Chicken; Meat Sauce & Spaghetti (Special); French Beans, Buttered Squash, Buttered Beans. Standard Daily Items: Roast Beef, Baked Ham, Fried Chicken, Fried Fish, Chopped Sirloin. Selection of Salads, Sandwiches and Pies.

Tuesday: Navy Bean Soup; Beef Stew; Liver w/Onions; Shrimp Creole; Smothered Steak w/Dressing (Special); Corn, Rice, Cabbage, Peas.

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

Thursday: Beef & Barley Soup; Beef Tacos; Diced Ham w/Lima Beans; Stuffed Cabbage (Special); Ranch Style Beans, Brussel Sprouts, Cream Style Corn.

Friday: Seafood Gumbo; Fried Shrimp; Deviled Crabs; Ham Steak; Salisbury Steak (Special); Buttered Carrots, Green Beans, June Peas.

Week of December 14-18, 1981

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

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

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

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

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

*Menu subject to change without notice

Hackett selected November Outstanding Secretary

Marilyn S. Hackett, branch secretary for the Electrical and Environmental Systems Branch, Flight Operations Systems Division, has been selected as the Outstanding Secretary for November at JSC.

She was presented a citation and a \$150 award by JSC Director Christopher C. Kraft Jr. Nov. 30.

The recommendation for recognition read: "Mrs. Hackett's high level of competence and dependability are exhibited consistently in her daily performance as the branch secretary. Prior to the recent FOD reorganization, Mrs. Hackett served as branch secretary in the Spacelab and Payload Operations Branch, Payload

Operations Division. In this assignment she supported Spacelab Operations Working Group meetings, where she was required to provide secretarial support to personnel from the European Space Agency (ESA) and other NASA centers in addition to her regular daily activities. In this role she responded to special requests for travel changes, typing, and preparation of presentation material for the engineers supporting the Operations Working Group. With the vast amount of knowledge she has accumulated in this role, she frequently directs incoming calls from ESA, NASA Headquarters and NASA centers concerning techni-

cal questions and schedules to appropriate engineers in the absence of supervisory personnel, saving not only delays in the transfer of information but also repeated phone calls. Because of her knowledge of the division office routine, she was frequently called upon to substitute for the division secretary, and her performance was always exceptional.

"Mrs. Hackett is regarded by her co-workers and superiors as enjoying her work and taking pride in producing large quantities of high quality work. Mrs. Hackett is noted for budgeting her time wisely, and as workload permits, seeking additional tasks so as to be continuously and productively

occupied while on the job. She is deluged with work on many occasions but always manages to accommodate everyone's support requirements in a timely manner with little or no regard for her own personal inconvenience. In the absence of other T&A clerks, she is frequently called upon to prepare other organization's T&A reports.

"The great enthusiasm and commitment to a very high personal standards which Marilyn brings to her job mark her as one of NASA's most dedicated employees. She has reaped nothing but praise from all who contact her and deserves to be recognized as one of the truly outstanding secretaries at JSC and within NASA."

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

For lease: Friendswood, 3/3/2, formal, study, 2,500 sq. ft., 1 acre wooded lot, prestigious neighborhood. Call 488-4425, or 488-7491, evenings.

For sale or lease: El Lago, 4/2/2, low 9.5 VA assumption or lease \$400/month. Call 488-5849.

For sale or lease: League City, 3/2/2, next to I-45, low 9.5 VA assumption or lease \$400/month. Call 488-5849.

For rent: CLC brick home, 3/2, study, fireplace, \$525/month. Lease, first and last month rent plus \$250 deposit. Available Jan. 1. Call D. Amann, x2425 or 333-2359.

For sale: Westwood Shores, Lake Livingston lot, attractive price, free trip, dinner, champagne, lodging to tour property. Call Hoyler, x4851 or 334-2150.

For lease: Baywind I condo, 2/2, W/D, pool, clubhouse, \$425/month, available Dec. 20. Call G. Franklin, x3491 or 474-5267.

For rent: Galveston By-The-Sea condo, 2 BR, furnished, for rent by day, week or month. Call Clements, 474-2622.

For rent: Furnished condo near KSC, ocean front, newest complex in vicinity, available now, \$1,000/month. Call John Holland, 1-367-9068, collect.

For sale: El Lago, home on wooded lot near lake, 4/2-1/2/2-1/2, non-escalating assumption, recent updates, 90s. Call 538-1313.

For rent: One furnished BR in a three BR home, all bills paid, six miles from NASA, \$170/month. Call Jeff, x7429 or 482-5393.

Cars & Trucks

1973 Audi 100LS, auto, A/C,

AM/FM, sunroof, new tires, good condition, \$1,500. Call Tony, 488-5510, x337 or 488-5849.

1976 Chevy Luv truck, 4 spd., AM/FM/cassette, new paint, complete engine overhaul. Call Ed Shumilak, 482-7723 after 4 p.m.

1977 Cadillac Brougham, all extras, good condition. Call 332-1765.

1977 Ford Pinto wagon, 4 spd., 4 cyl., A/C, luggage rack, 33K miles, excellent condition, \$2,650. Call Chuck Larsen, x3967 or 538-1477.

1976 Buick Electra Ltd., 47K miles, full power, \$3,300. Call Gary, 946-2499.

1964 Chevy Malibu, fair condition, will take best offer. Call Bill, x2811.

1979 Honda Accord, 3 dr., 72K miles, A/C, AM/FM/cassette, 5 spd., very clean, \$3,500. Call 554-2448 after 5 p.m.

1963 Chevy II 4 dr., auto, AM/FM, runs well, see to appreciate, \$800. Call Jim Ward, x3647.

1980 Citation, PS, PB, A/C, 4 dr. hatch, std. shift, tint glass, 18.5K miles, like new, \$5,000. Call X4905 or 488-1080 after 4 p.m.

Household

Cocoa Rose china by Flintridge, never used, 17 pieces, reasonable. Call Pat Noble, x4641.

Girl's white canopy twin bed, chest of drawers, \$30 for both. Call Susan, x5951 or 480-3356 after 5 p.m.

Wooden rocker, \$10. Call T. Ward, 488-5445.

Two black vinyl chairs, \$50 each; two glass top tables, \$75 each, all excellent condition. Call 334-5486.

Three piece luggage, \$25; two piece luggage, \$15. Call Chuck Larsen, x3967 or 538-1477.

Gun cabinet, fine furniture, fruitwood finish, like new, \$200. Call Ed, x4593.

Love seat by Henredon, excellent condition, \$125. Call Kenyon, 488-6232.

Pets

Guinea pigs, young, healthy, tame, loveable, \$7. Call x2323 or 333-3544 after 5 p.m.

Lost & Found

Lost: Orbiter gold tie tack on Nov. 15, possibly in Bldg. 30. Contact Moser, x2465.

Wanted

9 x 12 cm sheet-film holders of the type that fits Zeiss Maximar, Kodak Stuttgart Reomar and Bergheil cameras. Call Terry White, x5111 or 332-5177.

One copy of Vol. 19, No. 22, Oct. 31, 1980 issue of Roundup to complete two year collection. Call Clive Beetlestone, x5971 or 334-4459.

Want to buy lockable gun cabinet, prefer 4 to 6 gun capacity with lockable drawer. Call David, x5169 or 481-3656.

Female to share 2 BR, 2 bath condo in El Lago area, \$200/month plus telephone. Call 334-3278 or 337-1647.

Boats & Planes

1980 20-ft. Marquis Carribean, 140 hp Merc Cruiser, small cabin, on 26-ft. McClair trailer, tarp, full Coast Guard kit, \$7,500. Call Randy Ross, 488-3720 or 480-8281 after 4 p.m.

Outboard motor oil, \$1/qt. Call T. Ward, 488-5445.

Stereos & Cameras

Da-Lite, 40 x 40 lenticular slide projection screen, new, \$20. Call Maury Minette, x3141.

Heathkit GR-295 color TV, new 23" tube extra vacuum tubes, solid maple cabinet, works well, \$200. Call Joe, x3576 or 944-7042.

Stereo cabinet with separate speaker enclosures, 9 ft. long, solid teak, \$100. Call Sam Boyd, 483-2071 or 486-0441.

Musical Instruments

Hammond M-100 spinnet organ, drawbars, presets, pedals, reverb, \$900. Leslie 147 tone cabinet, \$300. Call Amann, x2425 or 333-2359.

Cycles

1974 BMW R90/6, 36K miles, full vetter fairing, saddlebags, stereo, \$2,200. Call 486-7043 after 7 p.m.

1978 Honda XR-75, needs valve job, \$150. Call 482-8827.

1980 Honda 750 Custom, low mileage, excellent condition, \$1,995. Call 487-7802.

Kawasaki 250, no papers, good for parts, \$150. Call 480-7200 after 4:30 p.m.

1978 Honda 250-XL Enduro, excellent condition, new chain, just tuned, 3.5K miles, \$700 or make offer. Call Mike Bailey, x4794 or 334-5909.

Boy's Free Spirit 24" 10-speed bike. Call 480-5329 after 4:30 p.m.

Carpools

Wanted: Two non-smokers to join carpool from Gulf Freeway and

Edgebrook to JSC, 7:30 a.m. to 4 p.m. shift. Call Tom, x2653.

Miscellaneous

BBQ pit on wheels, 3/8" galv. frame, redwood shelves, rotisserie, temperature indicator, \$65. Call Joe, x3576 or 944-7042.

Heavy duty regulation size ping-pong table, painted and ready to use, \$25. Call x3576 or 944-7042.

Outside door, solid wood with glass panels, 78 1/2 x 32 x 1 3/4, best offer. Call 333-2717 evenings.

Southwest Bell white candlestick phone, 1920 style with jack, like new. Call 488-4788.

Disney character roller skates, size 4 girl's, like new, \$12.50. Call Susan, x5951 or 480-3356 after 5 p.m.

Three maple bar stools, \$40 each; boy's 20" bike, good condition, \$25. Call 481-5460.

Portable building, 12' x 20', paneled, insulated, wired for 220 AC, \$1,750. Call 649-2414.

Oak firewood, one cord for \$115, 1/2 cord for \$65. Call 944-6513.

Are you unhappy with your eating habits or weight? Come to an Overeaters Anonymous meeting and get help. Non-profit, no fees or dues. Call 729-1438 or 488-2402.

Four goodyear steel belted radials, raised white letter, P225/70R15, 5K miles left, \$50. Call Dave, x2208.

Cabover camper, 9 1/2 ft., fully self-contained, \$950. Call Norm, x3803.

Motorhome for rent, weekly or daily rates, 24', A/C, 4KW generator, fully self-contained. Call 486-9144 or 488-4969.

Four VW 15" rims, three w/ fair steel belted tires, \$50. Call 482-7643.