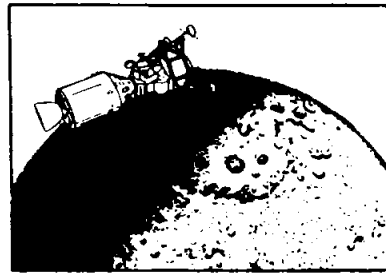


# ROUNDUP

NASA LYNDON B. JOHNSON SPACE CENTER

HOUSTON, TEXAS



Vol. 13 No. 27

Friday, December 6, 1974

## Center Changes GSA Transport Service

Current budgetary constraints and the national energy shortage have made it necessary for JSC to reduce the number of GSA vehicles now on permanent assignment to civil service and contractor organizations.

Beginning December 16, JSC taxis will operate only between onsite-offsite locations, to and from Ellington AFB, and between onsite-offsite points not served by the two shuttle buses which will be the main sources of

onsite transportation.

From 7:30 a.m. to 5 p.m. on normal duty days, the buses will depart Building 1 every 12 minutes, traveling in opposite directions. They will stop at onsite points at scheduled times which will be posted in the lobby of each building on the bus route. To accommodate an increase in the need to move heavy or bulky items not suitable for taxi or bus transportation, the Center's moving, hauling and delivery service will be modified with radio dispatch equipment. Employees in JSC and local contractor buildings may obtain this service by calling X2335.

For one-time transport requirements outside the immediate JSC vicinity, vehicles may be checked out for no longer than one day at the driver-user subpools located at Buildings 1 and 45.

Vehicles will be issued upon presentation of a written request (NASA Form 26) from a Division Chief or Technical Manager stating the purpose of the trip and reasons taxi service, moving and hauling services, or permanently assigned vehicles cannot be utilized.

Employees should keep in mind that walking is the preferred method of transport when the destination is within a reasonable distance.

The new transportation services, supplemented by a cooperative spirit from all employees, should provide responsive and efficient transportation support for JSC.

## JSC Takes Part In Agency-Wide EO Self-Evaluation

JSC is participating in NASA's first agency-wide Equal Opportunity (EO) Self-Evaluation Plan. Other NASA Centers are evaluating their EO Programs during this period.

Beginning in November every JSC supervisor reviewed and assessed the EO activities during the past 18 months and projected EO goals for the future. At the same time, other employees at the Center formed Constituent Groups to identify both the strengths and weaknesses of NASA's EO programs and to offer suggestions for improvement.

JSC had 19 Constituent Groups comprised of no more than 10 members each. The groups were formed in such a way that a sample of minorities, women, non-minorities and supervisors had an opportunity to contribute to NASA's effort to accelerate its EO progress. Group members were selected through a random process; participation was voluntary.

The information generated by supervisors and Constituent Groups and any other pertinent information will be presented to

the Center Director who will prepare a report for NASA Headquarters. Headquarters in turn will evaluate JSC and other center goals and will prepare an overall inventory of NASA's past progress and its projected future goals. All NASA Centers will receive feedback on the analysis.

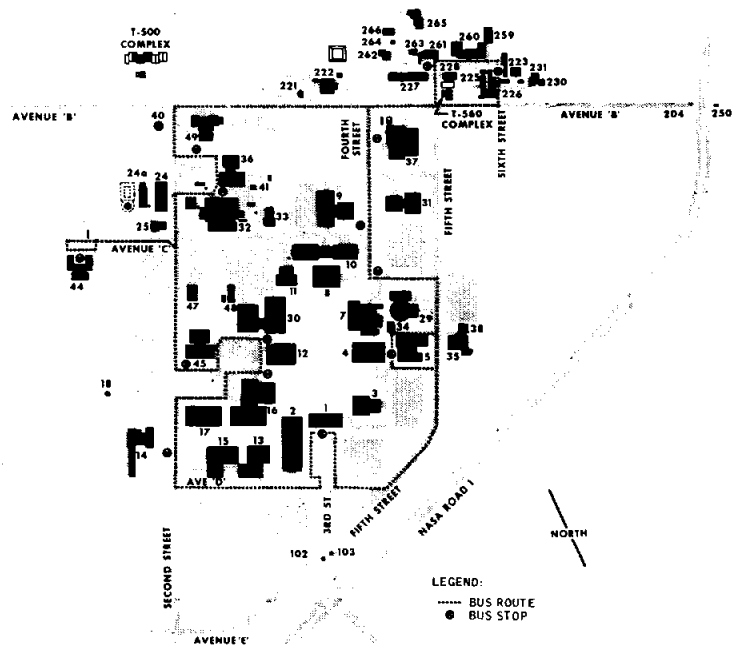
Dr. Christopher C. Kraft, JSC Director, stated that NASA's ultimate goal is to assure that no discrimination exists within the agency in "fact or appearance".

He added that NASA will take aggressive affirmative action to improve the attitudes of its current workforce, to develop the skills of all of its employees as well as to help increase the pool of talented minorities and females from which it can select future employees.

He also emphasized that the agency goal of eliminating discrimination means that the equal opportunity programs are for all employees regardless of race, color, sex, national origin, religion or age.

One of the primary aims of the evaluation is to make all employ-

(Continued on Page 2)



BUS ROUTE—The chart above depicts the route the JSC shuttle buses will take, starting December 16. The Center has implemented a number of changes in GSA vehicle transportation.

## Group Kicks Off Project

JSC Black Christmas Project Officials have announced that their annual fund-raising campaign to assist needy families will begin December 6.

Julius Mayhorn, Project chairman, says this year's goal is \$2500.

"I have no doubt that we will reach or exceed our goal," Mayhorn stated, "The support received from JSC and contractor employees in the last several years has been tremendous. I'm sure we can depend on them again this year."

The group last year raised \$2000, allowing them to provide food and toys to 65 needy families for Christmas. If this year's goal of \$2500 is met, they expect to reach about 80 families.

The Christmas Project did not begin as a spur-of-the-moment undertaking and neither is it operated that way. On the contrary, much planning and hard work is necessary, including forming committees, selecting families, preparing the Christmas dinner menu, and purchasing, packing and distributing the

food and toys. It is the dedication of the project participants that makes the project a success each year.

"We realize that not everyone can devote time to the physical aspects of the project; however the contributions from employees are equally important and deeply appreciated. After all, these donations enable us to accomplish our major goal—that of assisting 'those persons less fortunate than ourselves,'" Mayhorn remarked.

Although the group's primary objective is to assist low-income families during the Christmas season, they also spread "goodwill" at other times of the year. Last Easter, for example, they purchased shoes for 30 needy children. They have also contributed to other projects in low-income areas.

Employees who have not been contacted by project area coordinators and would like to make contributions should contact Mayhorn, X5540. The fund-drive will end December 17.

## NASA Tracks Soyuz 16

NASA began tracking the Soviet Soyuz 16 spacecraft shortly after launch early Monday and at 8:40 p.m. CST Tuesday, the Agency began a joint tracking exercise with the Soviet Union.

Information gathered by nine U.S. tracking stations will be compared to data received by Soviet stations during the same time period. The exercise is a forerunner of tracking operations and data comparison which will be required during the Apollo-Soyuz Test Project mission next July

Data received by U.S. stations is relayed to the Goddard Space Flight Center, Greenbelt, Maryland. The JSC's Mission Control Center is not involved.

The Soyuz 16 mission is a Soviet rehearsal for the ASTP mission. The cosmonauts now in orbit, Col. Anatoliy V. Filipchenko and Nikolay N. Rukavishnikov, are backup crewmen for next summer's joint flight and have taken part in joint crew training at JSC.

Apollo Spacecraft Program (Continued on Page 4)



SKYLAB MEMENTO—The Skylab 4 crew recently presented Kenneth S. Kleinknecht, Director of Flight Operations, with a medallion that was carried on the SL4 mission. Kleinknecht admires the medallion while JSC Director Dr. Christopher C. Kraft and the crewmembers, (L-R) Edward Gibson, William Pogue and Gerald Carr look on.

## Was Mathematician, Now A Self-Made Engineer

She has never taken a formal course in engineering in her life, nevertheless, the lady is a "bonafide" engineer!

Dorothy B. Lee joined the National Advisory Committee for



DOROTHY B. LEE

Aeronautics in 1948 as a mathematician. After continuously demonstrating an outstanding aptitude for performing in an engineering capacity, she was reclassified in 1957 as an engineer in the heat transfer area.

Today, she is manager of the Space Shuttle Program Engineering Subsystem for Aerothermodynamics and is senior engineer in the Structures and Mechanics Division, Aerothermodynamics Section.

Dorothy says her present status was not handed to her on a

silver platter; she had to work for it, and pretty hard too.

One of her initial assignments in the space program was performing aerodynamic and heat transfer studies associated with the design of research rocket vehicles, and analyzing the data obtained in the flights of these vehicles. Her work in this area enabled her to author numerous research publications and NASA Technical Notes.

With her extensive research experience in heat transfer, Dorothy was an ideal candidate for employment with the newly-formed Manned Spacecraft Center (now JSC). She joined the Center as an aerospace technologist in fluid and flight mechanics and served as project engineer in the analysis of the thermal environment associated with reentry of the Apollo command module spacecraft into the Earth's atmosphere. Her research in this area resulted in the publication of two important documents which provided guidelines for evaluating the thermal work of North American Rockwell (now Rockwell International), the prime Apollo contractor.

Although her early years at the Center primarily involved research for the Apollo Program, she was also responsible, during this time, for the design, test and evaluation of a molybdenum calorimeter—a device used in measuring heating rates on early

spacecraft ablation heat shields. Testing of the device, conducted for the last of the Mercury flights, led to the development of aerothermodynamic instrumentation for the Apollo spacecraft.

Dorothy has also developed new methods and equations for analyzing flight data, has performed analyses which have led to improved understanding of spacecraft thermal environment, and has successfully applied these analyses in determining flight environments that would be encountered under different flight conditions.

She was responsible for the interpretation of wind tunnel and space flight data for the Apollo Program and throughout the Program, directed the prime contractor in the area of entry aerodynamic heating.

Because of her thorough performance in this area, she was given the responsibility of determining the aerothermodynamic entry environment for the Shuttle. Working with a small team of experts, she directed the entire aerothermodynamic effort for the Shuttle preliminary feasibility study.

Her present assignments include monitoring the Shuttle prime contractor's aerothermodynamic efforts as well as directing NASA's support to the contractor in that area. She also coordinates the Shuttle aerothermodynamic studies in such technical areas as the thermal protection system, aerodynamic configuration, guidance and control, and trajectory determination.

Dorothy is responsible for highly complex specialized studies for determining spacecraft local convective heating. In addition, she analyzes and interprets ground test data relative to flight design heating rates.

She is also involved in launch and reentry heating problems which require planning and executing highly creative studies and methods for advanced mathematical techniques and for unique improvements in existing methods and analyses of previously unexplored design problems.

Dorothy says she considers her work a challenge as well as a source of "fun."

"When I majored in math at school, I never dreamed I would end up as an engineer," she said, "But I love the work, I wouldn't trade it for the world!"



RONALD L. BERRY

degree at the Harvard Business School.

As Acting Chief of Mission Planning and Analysis, Berry directs and supervises all manned spaceflight design.

He has received numerous honors and awards including the NASA Exceptional Service Medal, the Laurence Sperry Award and the William A. Jump Memorial Foundation Meritorious Award.

Berry is married to the former Genelle Childress of Ozona, Texas. They have two daughters and a son.

## "Ron Berry Day" Held In Grand Prairie, Texas

In 1956 at a small high school in Grand Prairie, Texas, Ronald L. Berry was chosen by the senior class as "the one most likely to succeed."

Indicating that this class had chosen wisely, a "Ron Berry Day" was sponsored by the Women's Division of the Grand Prairie Chamber of Commerce on November 22.

Berry, Acting Chief of the Mission Planning and Analysis Division at JSC, was honored at a civic dinner during which a "This is Your Life" type program was presented. The presentation included slides and taped "testimonies" emphasizing the significant events of Berry's life.

Principal speaker at the dinner was U.S. Representative Dale Milford, of Grand Prairie.

Earlier that day, Berry addressed an assembly of the city's secondary school students in the auditorium of Grand Prairie High School where he graduated as valedictorian in 1956.

Berry received a bachelor of science degree in aeronautics and astronautics from Massachusetts Institute of Technology in 1960 and a master's degree in aerospace engineering in 1962. On temporary leave from JSC, Berry in 1971 received a business



CREDIT UNION—Construction is now well underway for the new JSC Credit Union Building which is expected to be completed in February of 1975. The building is located across from the back JSC entrance on Gemini and Saturn.

## EAA Attractions

### TICKET CORNER

ABC Interstate Theatres—\$1.00 coupon good for admission to any ABC Theatre.

Sea Arama—year round—adults \$3.00, Children \$2.00.

Houston Aeros Hockey—all season—\$4.40 gift certificate (\$5.50)

JSC Childrens Christmas Party—December 14, 1974—\$1.00 ages 2-10.

Lion Country Safari—year round—free safari cards good for 10% discount.

Disney Magic Kingdom Club—free.

Houston Livestock Rodeo—Feb. 23, Matinee—\$5.00.

### AEROS WINNING

The World Champion Houston Aeros are winning again. After a slow start they are currently in first place in the Western Division of the WHL. They are an exciting team to watch. Also there's no smoking allowed in the coliseum during Aero games so the atmosphere is actually clear. Support the Aeros!

### RODEO TICKETS

The EAA has 200 center arena seats for the February 23 performance of the Houston Livestock Show Rodeo. The star performer is Helen Reddy. Tickets

are \$5.00 at the exchange store. This is the first time that the rodeo has agreed to put tickets out on consignment. Previously the EAA had to buy the tickets and absorb the loss for unsold tickets. If sales are good this year, tickets to additional performances will be available next year.

### MAGIC KINGDOM CARDS

New cards are now available free at the Building 11 Exchange Store. The new cards are good for two years—until December 31, 1976 and entitle holders to special discount ticket books at Disneyland and Disneyworld as well as a 10% room discount at most Howard Johnson's Motor Lodges.

### EAA CARD RENEWALS

Current EAA membership cards expire December 31, 1974. All JSC Civil Service employees will automatically receive cards. In order to get a card for your spouse it will be necessary to fill out the request below and mail it to JSC Exchange, AW. Contractors also must fill out request forms in order to get cards. Membership cards are required in order to participate in club, athletic and other activities at the Gilruth Recreation Center.

## Evaluation

(Continued From Page 1)

ees more sensitive and aware of the meaning of equal opportunity.



### REQUEST FOR EAA MEMBERSHIP

EMP. NAME: \_\_\_\_\_

BADGE NO. \_\_\_\_\_  
(NASA Employees)

EMPLOYED BY: \_\_\_\_\_  
(Contractors only)

BLDG #: \_\_\_\_\_ PHONE #: \_\_\_\_\_

MAIL CODE: \_\_\_\_\_

SPOUSES NAME: \_\_\_\_\_  
(NASA Employees)

# Remnants Of Elegance Pervade Jim West Mansion

By M. McWilliams

Behind Spanish moss-draped trees just outside the east boundary of JSC lies the \$600,000 West Mansion, now occupied by the Lunar Science Institute. Construction of the Italian Renaissance architectural home was started in 1929 and completed in June of 1930.

James Marion West, multimillionaire owner of the 30,000-

acre ranch extending from Clear Lake to Ellington Air Force Base, was not the type of man to allow things to go haphazardly.

His 17,000 square-foot stucco home was built of hollow tile with steel beams supporting the cement and Spanish tile roof. But aside from the impressive exterior appearance of the home, the interior is filled with remnants of elegant touches.

In the main hall, for example, 30 feet overhead, are the mahogany-paneled beams which still—with only slight retouching—have the original art decorations. But it doesn't stop with flowers and ornate designs; in the middle of the ceiling, in the center of each of 4 beams, there is a painting of a woman, each representing one of the fields of art, industry, science, and

medicine.

The fireplace mantle in the old dining room, (what is now the Hess Conference Room), has the hand-carved West crest with the French words, "Jour de ma vie", or, "Day of my life" engraved on it. Everywhere one turns, there are minor details encrusted on the major or more impressive ones that give a person an idea of what dignity and elegance it had as the home for the West family.

The mansion originally had 6 bedrooms, a sleeping porch with 6 or 8 beds, twelve bathrooms, a kitchen, pantry, dining room, breakfast room, reception room, library, reading room, music room, solarium, and a landing joining two magnificent swirl stairways with iron and mahogany banisters. Outside there are two dressing rooms, an eight-car garage, fish pond, fountains, a sunken garden, and the servants' quarters.

With all this room in the home, the entire family was never there. Only three members of the family ever lived in the home at the same time. There were three children in the family—two sons and one daughter. The oldest son, Jim West, Jr., now de-

ceased, was well known as "Silver Dollar Jim"; his own home was located in River Oaks. Little is known of the other two West children.

James West started in the lumber business in Westville, Texas and branched into securities after he moved to Houston in 1905. He bought the South Texas Lumber Company from Jesse H. Jones a few years later. He was at one time a partner of H.R. Cullen in the oil business and owned the Dallas Journal and the Austin Tribune. Upon West's death in August 1941, the house was occupied for another thirteen years. Vacated and abandoned in 1954, only hobos and vandals occupied it; they managed to destroy every pane of glass, break every chandelier, and gouge practically every piece of tile. (None of the 12-inch gold-on-black tile squares with roaring lions' heads exist, but the hand-painted blue and gold imported tiles from Tunisia are still intact in one of the 2nd floor bathrooms.)

In February 1969 renovation on the mansion began; the Lunar Science Institute moved in on October 27, 1969, and dedication ceremonies were held on January 4, 1970.

Fortunately, the people who tackled the job of restoration were both skilled and determined in salvaging as much of the mansion's grandeur as possible.

And so it lies—all of the bedrooms and four of the bathrooms have been converted to offices for a center for advanced research on problems in lunar science. And, even with the remodeling done and the new furniture—without its being eerie—a feeling of quietness and mysteriousness pervades in the long hallways of the old James West Mansion.



WEST MANSION—A touch of elegance still prevails at the \$600,000 West Mansion, now the Lunar Science Institute. Construction of the Italian Renaissance architectural home started in 1929 and was completed in June of 1930.



ROMANTIC SETTING—Lush vegetation, a statue and the pool against the Romanesque-type backdrop set the mood for romanticism and profound secret thoughts at the Jim West Mansion.



TENNIS COURT—A tennis court was part of the outdoor recreation Jim West provided his family and friends.

## Swap-Shop Roundup

Swap Shop advertising is available to JSC and on-site contractor personnel. Articles or services must be offered as advertised, without regard to race, religion, sex or national origin. Ads should be 20 words or less, including home telephone number. Name and office code must accompany, but need not be included in ad copy. Typed or printed copy must be received (AP3 Attn: Roundup) by Thursday of the week before publication.

### MISCELLANEOUS

Ladies gold Hamilton wristwatch, keeps xint time. \$50. Mary, 488-1550 aft 5.  
Wards pet clipper w/ accessories, used once, \$10. Barbara, 481-5956 aft 5:30.  
Designer wedding dress and veil, sz 5 both \$60, evening gown, worn once, yellow chiffon designer fashion. \$50. 481-6372 aft 5:30.  
Shingerland drum set, cost \$1,017 new, sacrifice. \$750. Jack 471-4071.  
Heathkit smoke/fire detector, xint cndn costs \$110 new, will sell for \$65. 488-0266.

### HOUSEHOLD ARTICLES

Spinet piano, fruitwood finish, li nw, recently tuned. Poridexter, 474-2203.  
Chrome dinette table and chairs. \$25. Jack, 471-4071 aft 4.  
Wood casement 35" wide w/ bl/green fabric; contemp swivel chairs, nd recovering, stl bdfm 334-2129 Suraci. 334-2129.  
Sears portable 19" b/w tv, 1 1/2 yrs old, must sell, sunscreen and cart incl. 481-1775.  
Dinette table w/ formica top, 6 chs, gd cndn, \$35. Smith, 488-3238.

### VEHICLES

68 VW Campmobile, pop top, sleeps 3 adults, 1 child, sink and icebx, gd gas mi, \$1595. 488-3903.  
63 VW Bug, \$200, gd work car. Carolyn, X4358.  
74 Motorcross Bullaco, 250cc, good for trails, 723-5807.  
71 Honda, SL 350, lw mi, xint cndn, Shelby Owens, 554-2969, \$525.  
Fiat, 68 850 Spider conv, lw mi, xint cndn.

32+ MPG, trade for TRK or \$875. 488-6095, Bullock.

67 Buick LeSabre, auto, air, nw rings, bearings, ignition, tires, paint, blu w/ wh vinyl top, \$1195. 466-0853.

72 open road mini motor home, 3.5 kw, air, fully equipped. \$6,700. 471-2739.  
Wards 3-spd bike, girls, li nw, \$30. 944-4284, Gurganious.

### PROPERTY AND RENTALS

Sagemont, 2500 sq ft, 4 bdrm, 2 1/2 bths, Jan. 25-July 1, \$375/mo, 481-0570.  
Point Lookout, wooded waterview lot on Lake Livingston, 75x137, utilities. \$2995, 946-7587.  
Forest Bend, 4-2-2, fireplace, 1670 sq ft, Actkinson, 488-2857.

### BOATS

17 ft fiberglas boat, blue/white, 65hp Evinrude motor, on Little Dude trailer, gd for ski rig or fishing, xint cndn, \$2000, 483-3335 or 488-0644 aft 6.  
70 15 ft tri-hull boat, 55hp Evinrude, galvanized trailer, \$900, 946-7587.

### WANTED

Lionel 027 trians and accessories, Winston, 4231.  
Metal detector, reasonably priced, Workman, 534-6362.  
1 person to complete carpoo, from Westminster Village, Alameda Mall area, 8-4:30. Lance, 941-6572.  
Persons interested in JSC guitar club, emphasis on finger style instrumental music for acoustic guitar, Gorman, 521-9805 or X5886.

Take stock in America.  
Buy U.S. Savings Bonds.



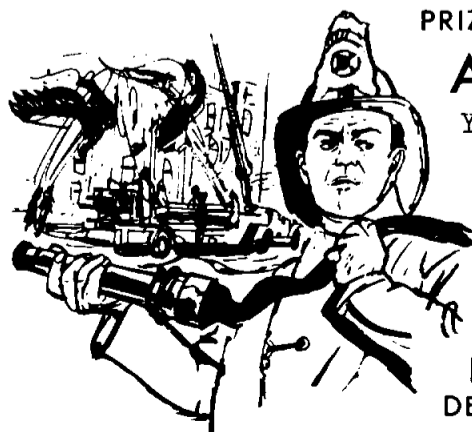
Join the Payroll Savings Plan.

## PRIZE-WINNING TV DOCUMENTARY AT JSC ABC News Close-up: FIRE!

YOU MAY BE SHOCKED BY THIS  
DRAMATIC REVELATION OF THE FIRE DANGERS  
PRESENT IN YOUR EVERYDAY LIFE!

See the peril that lurks in commonplace building materials, clothing fabrics, household matches, and even the location of the gas tank in your car.

narrated by jules bergman  
DEC. 9th - BLDG. 2 AUD. - 10 AM & 2 PM  
Admission Free



TENNIS COURT—A tennis court was part of the outdoor recreation Jim West provided his family and friends.

## ROUNDUP

NASA LYNDON B. JOHNSON SPACE CENTER

HOUSTON, TEXAS

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Editor: Janet Wrather

Photographer: A. "Pat" Patnesky

# STARPAHC System Utilizes Remote Health Service Capabilities



**SELLS HOSPITAL**—Pictured above is the Sells Hospital. The STARPAHC Health Services Support Control Center is located in one wing of the hospital and is analogous to our Mission Control Center. It will be staffed by physicians and a system operator.



**COMMUNICATIONS RELAY**—The Quijotoa Relay Station is being hauled to the top of Mount Quijotoa in the Papago Indian Reservation. This Station will be used for microwave and VHF transmission of television links with the other facilities.

## Soyuz 16

(Continued From Page 1)

Office officials at JSC received several telephone calls from Soviet ASTP officials following the launch of Soyuz 16. They report that the mission is going well and that the crew is in good health and has been observed from the ground via color television.

NASA has been given the state vectors for Soyuz 16, mathematical definitions of the spacecraft's location and velocity at stated times. That information assists in tracking by ground stations.

Soviet officials have also informed NASA of the plan for

testing the compatible docking system developed for ASTP. Attached to the Soyuz 16 docking system is a donut-shaped metal flange with latches. Using this passive test ring, the cosmonauts are able to operate the Soyuz docking system in several test modes. The test ring will be retained by Soyuz until near the end of the mission.

U.S. stations involved in tracking Soyuz 16 are at Ascension, Bermuda, Canton Island, Hawaii, Kwajalein, Merritt Island, Florida, Tananarive, Grand Turk and Antigua.



**PRESENTING AWARD**—Little Pat Fontenot, from the Neighborhood Center's Pasadena Day Care Center, presents Roy Aldridge of JSC with the Leadership Award for the Government Division of the United Fund Drive.

JSC, with the cooperation of the Indian Health Service of the Department of Health, Education and Welfare, has begun a program which utilizes an earth-based remote area health services system as a step to development and verification of a remote health services spacecraft capability.

Called STARPAHC (Space Technology Applied to Rural Papago Advanced Health Care), the program will be conducted on the Papago Indian Reservation in Arizona. The reservation covers approximately 11,180 square kilometers (4,300 square miles) west of Tucson and south of Phoenix with the Mexican border on its south boundary.

STARPAHC is designed to allow physicians to administer quality health care to patients in remote areas without the physicians' being physically present. The Lockheed Missiles and Space Company was selected as the NASA contractor for assembling the system and supporting its field operations.

Citizens in remote areas such as the Papago reservation face an ever-increasing problem of acquiring quality health care. This problem results from national shortages of trained physicians, inability of remote areas to attract new physicians, geographical dispersal of populations and medical capabilities, and other reasons. A system such as STARPAHC may provide a satisfactory solution.

Similarly, long duration manned missions will likely require that some members of the crew be specially trained to consult with the ground and obtain special assistance and/or supervision to assure quality health care.

Obviously, many similarities exist between administering quality health care in a spacecraft and administering the same care to a remote population on Earth. Consequently, the communication and data processing system required on long-duration space missions may also be similar to that required for a remote health services system on the ground.

Thus the operation of a "test-bed" health care system on the Papago Reservation is intended to provide a reasonable simulation for gathering information applicable to a flight system's design and at the same time improve the quality of health care delivery on earth.

The Papago site was selected for several reasons, including the community's willingness to support the cost of the system after the two-year test period is completed, and its willingness to accept primary care from the physician's assistants. (Arizona is one of 28 states which does not prohibit using physician's assistants.)

Beneficiaries will be the 8-10 thousand permanent residents of 75 villages in the Papago reser-

vation and the 2-4 thousand who live outside the reservation's boundaries but return to the reservation for health care.

The HEW's Indian Health Service previously administered health care on the reservation through a hospital at Sells, Arizona and a part-time clinic at Santa Rosa. A large, well-equipped Indian Health Hospital is also in Phoenix with many specialists on the staff.

In the STARPAHC system, Sells and Santa Rosa serve as key elements for the Support Control Center (SCC) and the Local Health Services Center (LHSC), respectively. Also, the Phoenix Hospital is the Primary Referral Center (PRC). For health care service to remotely located villages, the system will utilize a Mobile Health Unit (MHU), a well-equipped van-type vehicle which will visit villages on a pre-selected route and schedule.

Medically-trained Community Health Medics (CHMs or physician's assistants) located at the fixed clinic at Santa Rosa and in the MHU administer health care to patients under the direct supervision of the physicians who are miles away at the Sells Hospital. The CHM's are linked to the physician through radio and television hookups, enabling the physician to view the patient or his affected body area as well as x-rays, microscope slides, etc.

Simultaneously, descriptions and responses to the physician's questions—by the CHM and the patient—can take place via the radio link. This, in effect, extends the high-quality diagnostic

and treatment capability of the physician over large distances and multiple clinics while he is located at the Hospital.

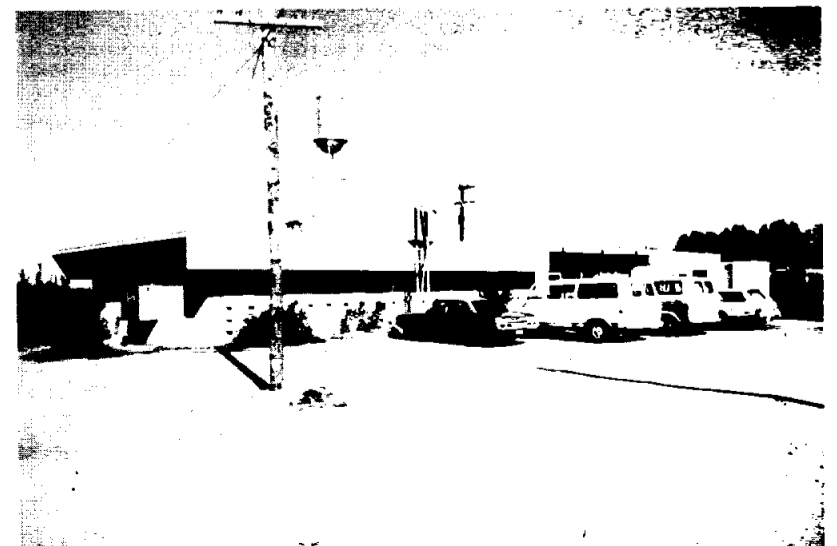
An automatic data processing network supports the activities of the physician, CHM, laboratory technician and other system personnel by enabling them to request important information from the computer using typewriter keyboard-type terminals. The requested information is displayed on a television screen almost instantaneously and can include patient histories, instruction for care, diagnosis aids and the like. Following the patients visit, information is entered into the data system through the same terminals so that all the patient information will be current.

In cases where the physician at the hospital wants to consult with a specialist at the Phoenix Indian Health Service, he has the capability for transmitting views of x-rays, wounds, lesions, patients etc, from either clinic to the specialists' stations using the slow-scan television. He can also have a direct telephone line for discussion with the specialist.

This unique combination of capabilities enables patients at the remote clinics to be diagnosed by the physicians miles away at the hospital, and to be immediately treated by the CHM in the clinic under the physician's direction. The entire activity is accomplished in minimum time and without the patient having to travel considerable distances.



**MOBILE HEALTH UNIT**—The STARPAHC Mobile Health Unit is a clinically equipped van-type vehicle which is staffed with a physician's assistant and a laboratory technician. It will function as a remote mobile clinic, visiting villages on a preselected route and schedule.



**SANTA ROSA CLINIC**—The Santa Rosa Clinic will serve as the Local Health Service Center and will function as a fixed remote clinic in the STARPAHC System.