

First HEAO-2 photo of Cygnus X-1, a potential black hole binary, 6,000 light years away

# ROUNDUP

Lyndon B. Johnson  
Space Center



December 8, 1978 Houston, Texas

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## NASA seeks experiments for future Venus mission

If all goes as planned, NASA will launch another spacecraft to Venus in 1984, and the space agency is looking for scientists to propose experiments for the mission.

The Venus Orbiting Imaging Radar (VOIR) Spacecraft would take off from the Space Shuttle to Venus, a typical trajectory beginning in December of 1984. The spacecraft would arrive in May of 1985 and go into a near-polar orbit in late June or early July. Experiments and mapping would then continue for five months.

When announcing that NASA will solicit science investigations for the mission, Dr. Noel W. Hinners, associate administrator for space science, said, "While considerable knowledge of Venus' atmosphere will be forthcoming from Pioneer Venus, information on surface morphology on a global scale is lacking.

"A major technical goal of the VOIR mission is to obtain global radar imagery with enough resolution to address fundamental questions on the origin and evolution of the planet, and to lay groundwork for subsequent investigations of the surface and interior." Space scientists expect VOIR imagery to disclose the presence or absence of con-

tinents, oceans, mountain belts, rift valleys, fault belts, and volcanoes on Venus.

Hinners stressed that VOIR has not yet been approved, but early selection of investigations allows for a well-defined program with approval is received.

For more information contact Dr. Noel Hinners at headquarters, Mail Code "S", Washington 20546.

## Note: the center closes for Christmas

**12/26 Management of Job Stress:** conducted by Sandra Scott and Lou Garner of the Dallas Regional Civil Service office.

**12/27 Personal Growth:** Scott and Garner

**12/28 Transactional Analysis:** Conducted by Dr. Warren Chaney of UH Clear Lake.

During the coming Christmas closedown, employees who are not taking leave can attend the above series of training seminars at Gilruth Center.

Last year the center closedown saved \$42,567 in utility costs, by using 20.68 x 10<sup>9</sup> less source BTU's, according to a study based on energy use the ten days

prior to the Christmas closedown.

Personnel has structured this year's four days of training especially for the JSC employee group, taking into account diverse backgrounds and interests, said Freda Marks of Employee Development.

The courses are held 8 - 4:30 on the main floor of the Rec Center.

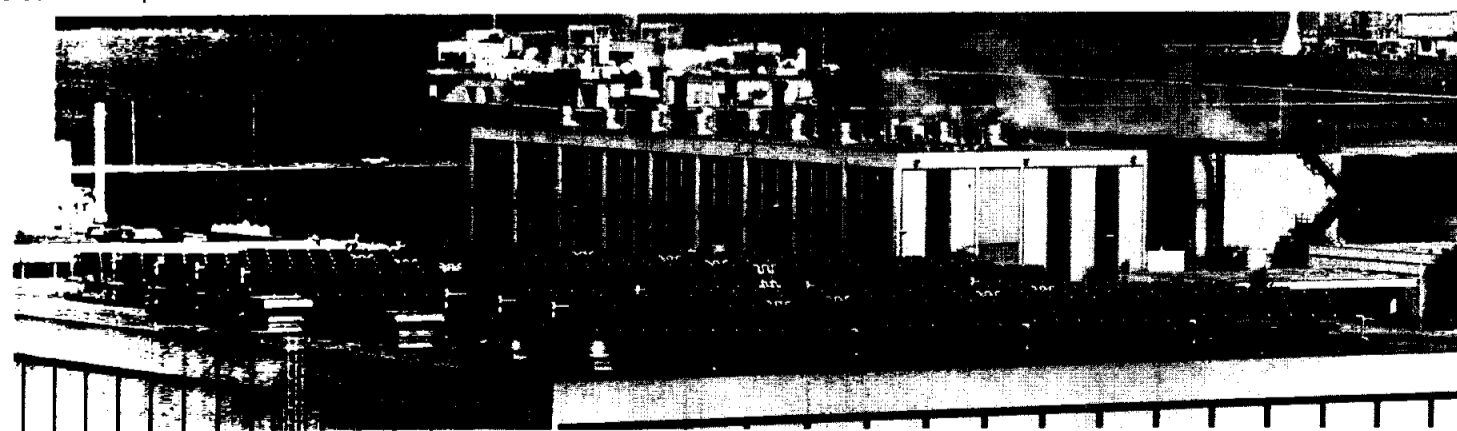
## Encounter Timeline

Progress of Pioneer Venus

- 12/8: a.m.: Data on cloud tops and upper atmosphere. p.m.: Third planet picture received. Final adjustments to bus entry angle, calibrations, and neutral mass spectrometer cap released.
- 12/9: Atmosphere entry operations begin. At 28 miles altitude, Sounder Probe parachute jettisons. Data rate of north probe, day

- 12/10: probe, and night probe reduced due to atmosphere thickening. Preliminary cloud location and density data. Preliminary density data, and lower atmosphere thermal structure data.
- 12/11: Sounder probe infrared data on heat trapping.
- 12/12: Data on solar energy deposition, cloud-layer particle size, and cloud components. Data reduction on number density of upper atmosphere. Ion mass spectrometer measurements of upper atmosphere. Measurements of Venus heat trap-

- ping from net flux radiometers. Thermal structure of ionosphere, electric field readings of solar wind-ionosphere interaction.
- 12/13: Further data on heat sources in atmosphere and cloud density of lower atmosphere. Readings on solar heating in atmosphere and cloud particle characteristics.
- 12/14: Cloud characteristic data from solar flux radiometer.
- 12/19: Solar corona turbulence and solar wind velocity near the sun from effects on Orbiter radio signal.



## MCC solar cells save

This past year, solar collectors on the roof of Building 30 have saved the center an estimated \$8,000, or 2,870,000 cubic feet of natural gas, "equal to the annual natural gas consumption of 15 average

houses in the Houston area," said Dick Mayo of the Engineering division.

He emphasized that the collectors are not part of the building's energy supply, their role is to supplement the dehumidifying equipment. "That's a hefty requirement in that building," Mayo said.

The panels help control humidity in Building 30 which houses Mission Control Center. The collectors have been in operation since November 1977.

The panel collectors carry a third of the load required to supply hot water for a heat exchanger, one element of the steam system that dehumidifies the building. Air passes over cooling coils where moisture condenses out, then through the exchanger where it heats to the proper temperature. Water circulates through the panels, heat exchanger, pumps, expansion tanks, and back through the solar panels.

## Lab probes Seasat data

Data collected during Seasat's 106-day lifetime will be processed at JPL, and project officials expect the tasks to occupy more than a year and a half.

Seasat's synthetic aperture radar completed 300 data-gathering passes, collecting images of sea ice, waves, coastal conditions and various land forms. The spacecraft's scatterometer (sea surface wind speeds) and scanning multi-frequency microwave radiometer (sea surface temperature and wind speed) collected data for 99 days; and the visual and infrared radiometer returned data for 70 and 52 days, respectively. In addition, Seasat completed a series of sea surface fact-finding experiments.

A failure review board is working to find the cause of the premature end to the spacecraft's operation. Seasat was

(Continued on page 4)



**LENGTH OF SERVICE**—Above, Engineering Director Maxime Faget receives 35-year award from Center Director Christopher C. Kraft, Jr. At right, are four other employees who have served over 35 years.



**Dennett**

**Corbett**



**Breeler**

**Lancki**

**Clubs**

**Toastmasters welcome new members**

The Spaceland Club meets at 11:30 the second and fourth Wednesday of each month at Bonanza near JSC. They provide training for public speaking and making presentations. Interested persons should contact the President, F. U. Williams, at 483-2254.

**AIAA meet to revive aviation history**

Dr. John Bertin of the University of Texas at Austin will speak on "The Wrights and Wrongs of Aviation" Tuesday, December 12, at the AIAA meeting at Gilruth Center. He will present information about significant firsts as well as humorous "onlys" in aviation. The program starts at 6 with a social hour, with roast turkey dinner at 7, and the speaker at 8. Members: \$6:50, non-members: \$7.50. To attend the speech only, cost is \$4.50. For reservations call Sharon Kemp at 483-2529.

**30 honored for years of service**

Length of service awards went to employees with 25 years or more of service November 7. Center Director Dr. Christopher C. Kraft, Jr. gave certificates to the following persons:

**40 years:**

Armistead Dennett

**35 years:**

Dave W. Corbett, Roscoe Breeler, Alfred J. Lancki, Maxime A. Faget.

**30 years:**

Martin Miller, Willaim B. Karpf, Angeline

S. Duke, Robert B. Merrifield, Stanley Faber, Wilford P. Hilk, John H. Quibodeaux, Harold J. Ferrere, John M. Hawk, William L. Gill, Arnold Bankey, Jack A. Kohanke, Albert Matties, Jack A. Ramsey, Dorothy B. Lee, James I. Brownlee, William Baldwin, Paul A. Folwell.

**25 years:**

Lawrence K. Gaventa, James A. Little, Gerald L. Hunt, Ridgon E. Joosten, Fred D. Rowell, Eston F. Meade, Sylvester Barrett,

Rees H. Underhill, Donald R. Osgood, Donald K. Netzband, Donald I. Hamilton.

**What's cookin' in the JSC cafeteria**

**WEEK OF DECEMBER 11 - 15**

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

**TUESDAY:** Navy Bean Soup; Beef Stew; Liver w/Onions; Shrimp Creole; Steak Sandwich on a Bun w/Onion Rings (Special); Cabbage; Corn; Peas.

**WEDNESDAY:** Clam Chowder; Roast Beef; Baked Perch; Chicken Cacciatore; Seafood Croquette (Special); Mustard Greens; Italian Beans; Sliced Beets.

**THURSDAY:** Beef & Barley Soup; Baked Fish; Roast Chicken w/Dressing; Diced Ham w/Lima Beans; Stuffed Cabbage (Special); Ranch Beans; Brussels Sprouts; Lima Beans.

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

**WEEK OF DECEMBER 18 - 22**

**MONDAY:** Cream of Chicken; Beef Burgundy over Noodles; Fried Chicken; BBQ Sausage 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:** Clam Chowder; Fried Perch; Tamales w/Chili; 8 oz T Bone Steak; Spanish Macaroni (Special); Ranch Beans; Spinach; Beets.

**THURSDAY; CHRISTMAS SPECIAL:** Roast Chicken w/Cornbread Dressing and Giblet Gravy or Ham w/Cherry Sauce. Choice of 1 Vegetable, 1 Potato, Roll, and Beverage. Chicken Vegetable Soup; Chopped Sirloin; Baked Fish; Green Beans; Buttered Carrots; Fiesta Corn; Garden Peas; Parsley Potato; Whipped Potatoes; Candied Yams.

**FRIDAY:** Seafood Gumbo; Broiled Flounder; Fried Shrimp; Baked Ham; Tuna & Noodle Casserole (Special); Corn; Turnip Greens; Stewed Tomatoes.



**SANTA'S HELPERS**—When Santa Claus has a hard time fitting everybody on your Christmas list, help him with U.S. Savings Bonds. There's never a worry about color or size. And Bonds fit your budget, too.

**Short of runners, JSC placed second Joggers needed to up center's points**

Team results of the recent Intercenter Run are now in and JSC runners should be proud. Overall they finished second and third in the 2-mile and 10-km events.

JSC's low, as in the past, was participation. "All of you who jog every day but did not participate in the Intercenter have again allowed a first place to slip away," said Tim Kincaid, coordinator of the event at Gilruth Center. Before bonus points for participation, JSC had a commanding lead in the 2-mile event, with 96 total points. Next closest, Ames, had 75 points. Ames, however, turned out 6.6 percent of their work force, compared to JSC's 2.7. They overtook JSC and what should have been an insurmountable lead.

In future Intercenters, sprinters and daily lopers will have to enter in order to bring those first place trophies back to JSC where they belong, Kincaid said.



"What really hurts is to have people run by on their daily workout, while we are out there running a heat, timing people for the race. We should lead the Intercenter every time out," he said. "The problem is getting more than 100 of the estimated 800 to 1000 joggers out there running." Any suggestions to help in this effort, call the Recreation Center at x3594.

Final scoring found Ames with 116 points in first place. JSC's composite score was an impressive 111, five short of first place. Headquarters finished third with 80.

Of the seven teams in the 10-km race, Ames again captured first place. Composite scores for top finishers are: Ames 142; Lewis 103; JSC 92; and Langley 60.

**On Sale at the Exchange Stores**

- Dean Goss tickets - \$10 single \$20 couple (Reg. \$14.50 each)
- General Cinema tickets - \$2.40 each
- ABC Theatre tickets - \$2.00 each
- Magic Kingdom Cards - Free
- Children's Christmas Party - \$1.50 each

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## Co-op of month performs tasks for Shuttle

Paula Maestas, co-op of the month for November, is an engineering student trainee in Crew Systems.

Since her first co-op tour, Maestas has assumed an active role in preparing support systems to be used during Chamber "A" testing. She also provides engineering support for Chamber "B" tests of flexible/deployable radiator concepts.

Maestas has also carried out tasks which support the buildup of Shuttle ECLSS Test Article Facilities in Building 7. She has accomplished jobs normally performed by junior engineers.

Maestas has accepted each task as a challenge; and she has displayed competence, initiative, and an eagerness to learn. She is a third year mechanical engineering student at the University of New Mexico, and her current tour extends through December 1978.

### FEB-FBA Awards

## Center claims 'Employees of the Year'

During the Federal Employee of the Year awards program, Jose Ramiro Perez of the Equal Employment Opportunity office received a certificate of appreciation recognizing his leadership and initiative he has taken in carrying out presidential directives.

One month earlier, Perez was recognized for contributions to the Hispanic community at the Houston celebration of the 1,000th year of the Spanish language.

Perez was instrumental in setting up the space center's affirmative action plan.

### Supervisor of the Year

James W. Thompson was named Supervisor of the Year at the Federal Executive Board program November 15. Thompson is Assistant Chief of the Integration Division, and Deputy Manager of the Space Shuttle GFE Project Office.



**BEAN AND MAGIC**—Marlo, of Saturday morning's "Marlo and the Magic Movie Machine" looks on in awe as Astronaut Al Bean explains space programs past and future. Marlo and a crew visited JSC in October preparing a TV special on 75 years of air flight. Marlo, here, has turned into Wilbur Wright. "I would have thought you'd have made some advan-

cements since I left," Marlo (Wright) said. "My first plane was a glider. I come 75 years later, get in the Space Shuttle simulator, and you're still flying gliders." Marlo (Wright) admitted having trouble landing the Shuttle, "but so did Al." The show, parts taped at JSC, airs December 23, on Channel 39, from 6 - 6:30.

Photo by Charlie Turner

## November's secretary is efficient

Barbara L. Bettison shares with one other secretary the office support workload of 25 technical personnel, while carrying out the duties of secretary to the Manager of STS Operations Program Control office. Bettison was named Secretary of the Month for November.

She has exceptional ability to work under pressure coordinating editing, typing, and assembling of numerous reviews, her boss, James J. Shannon, said. These reviews require constant interaction with other offices and other NASA centers, and Bettison is able to handle them "quickly and efficiently, assuring in each instance that the right person gets the right information," Shannon said.

Recently, STS Operations became in-

involved with Shuttle payload integration and development. Over the past several months, Bettison has supported planning for the User Charge Services which will cover non-government use of the Shuttle.



Barbara L. Bettison

"Mrs. Bettison was quick to familiarize herself with the many tasks associated with the new program," Shannon said. She assessed impact on the secretarial workload and saw to it that support for the program would not be lacking.

"Her success in this key secretarial role is due to her ability to recognize priorities and make the appropriate trade-offs to accomplish the most critical work first," Shannon said. "Additionally, she is so proficient and conscientious in taking care of overtime, travel, time and attendance, etc., that I never am concerned that these important functions will not be taken care of.

"Mrs. Bettison ranks high in the secretarial profession," Shannon said.

# Roundup Swap Shop

Ads should be under 20 words and include home phone number. Typed or printed ad copy, a separate sheet for each ad, must be in the Roundup office AP/3 by Wednesday the week prior to publication. Swap Shop advertising is open to JSC federal and on-site contractor employees for non-commercial personal ads. Goods or services must be offered as advertised, without regard to race, religion, sex or national origin.

### Cars & Trucks

'73 Plymouth Satellite Sebring, orig. owner, low mileage, excellent second car. Sharon Barnes. 483-6100 Days.

'73 Ford Pinto Wagon, AC, automatic, \$1200. McWhorter. 487-2391.

'78 Chevy, Caprice, PS/PB/AC, cruise control, split reclining seats, blue/blue, AM/FM stereo, perfect cond. Hester. 332-2291.

'72 Plymouth Duster, Auto, PS, AM/FM cassette stereo, slant 6, economical \$525. 483-3871, 487-4325. Larry.

'69 Chevrolet Caprice, 2 door coupe, white with black vinyl top, 325 V-8, auto w/air-cond., 75D miles and in exc. shape. \$1900. Ed. X4031.

### Cycles

'72 Yamaha 100 CC, needs mech. repair \$145. 488-1326 after 5.

'73 Honda ST-90, only 400 miles, always garaged. Looks new. \$395. 334-1982.

'65 Honda CB160 Motorcycle, black w/silver trim, luggage rack, new rear tire and chain. Mechanically sound and in clean cond. \$250. Ed. X4031.

Girl's 20" bicycle, mechanically sound. \$17.50. AMF pedal powered tractor. 474-3319.

'72 Yamaha 100CC body in good shape, eng. needs minor work. \$140. 488-1326.

### Pets

AKC registered Chow-Chow puppies for sale, 58 champions in blood line, real beauties, just in time for Christmas. Byrns. 337-4984.

Double AKC registered Irish Setter, hunter pup male, 4 months. Must sell at best reasonable offer. Eggleston. 482-4239. 483-5584.

Standard poodle puppies, 6 black, 1 champagne; born 11/24 ready for a new home 1/1 \$50, no papers. Sandy Burdsal. 482-2873 after 5:30.

### Wanted

Used Exercycle (Stationary Bicycle) Call evenings. 488-5575.

'65 Dodge Dart for parts. Particular need differential. Up to \$100 for good/reasonable cond. Burrell. 482-1625.

5 hole 14" rim for tubeless tire. Must be compatible with 678-14 tire. Ed. X4031.

Boys 5 or 10 speed bicycle for under \$40. T. Ward. 488-5445.

Trade land on Lake Livingston for motorhome or late model car pickup or van. (77 or 78) T. Ward. 488-5445.

### Property & Rentals

For Lease: Pasadena-Parkgate-House 3-2-2, wood fence, central A/H major appliances, 1 year lease. McWhorter, 487-2391.

Rent: Lake front vacation, fishing, hunting, or escape retreat at Indian Hills or Nugents Cove on Lake Livingston Winter rates, by the day or week, phone 554-6093 after 2:30.

Rent: One bdrm. with kitchen privilege to a conscientious non-smoker. \$150/mo. furn. 482-5393 after 5 or weekend. 6 miles from NASA.

For Sale: 1 acre wooded lot at Beaver Creek (Lake Sommerville) Call S. Schmidt. X4063 or 333-4379 after 5.

### Household Articles

Upright freezer, large, less than year old, \$300. 641-7134. Lucie.

Sears Gas dryer, 2 years old, auto electric pilot white heavy \$100. 331-8665.

Mexican octagonal table 44" diameter, and 4 chairs. Beautiful wrought iron/wood base \$200. Valued at \$570. 334-1881.

8 ft. custom built shaw couch, cushions plus side pillows; Victorian antique wash stand w/marble top; Mahogany Queen Anne lamp table, needs refinishing; Mahogany Queen Anne lowboy made by Hickory, varnished pine clothes chest; Unpainted pine lamp table. Call 333-2778.

25" Color console TV (1967) Airline, not working, \$30. Two 20" girls bicycles, need tires & seats, \$8 each or \$15 both. Two 35" x 80" glass patio doors. \$30.

### Musical Instruments

Piano, Kawai Console, rosewood finish, excellent condition \$1200. J. Mitchell. 946-7011.

### Boats & Planes

16' Sail boat w/trailer, 95 sq. ft. sail, \$350. 483-3871, 487-4325. Larry.

### Stereos & Cameras

Ortofon F-15-E, stereo cartridge, tracks 1-2 grams. Perfect with Universal headshell \$20. 488-3466.

### Miscellaneous

Heathkit solid state color bar and dot pattern generator. 488-5445. Tex Ward.

12 Volt power supply radio shack model 22-127. \$9.95 Tex Ward. 488-5445.

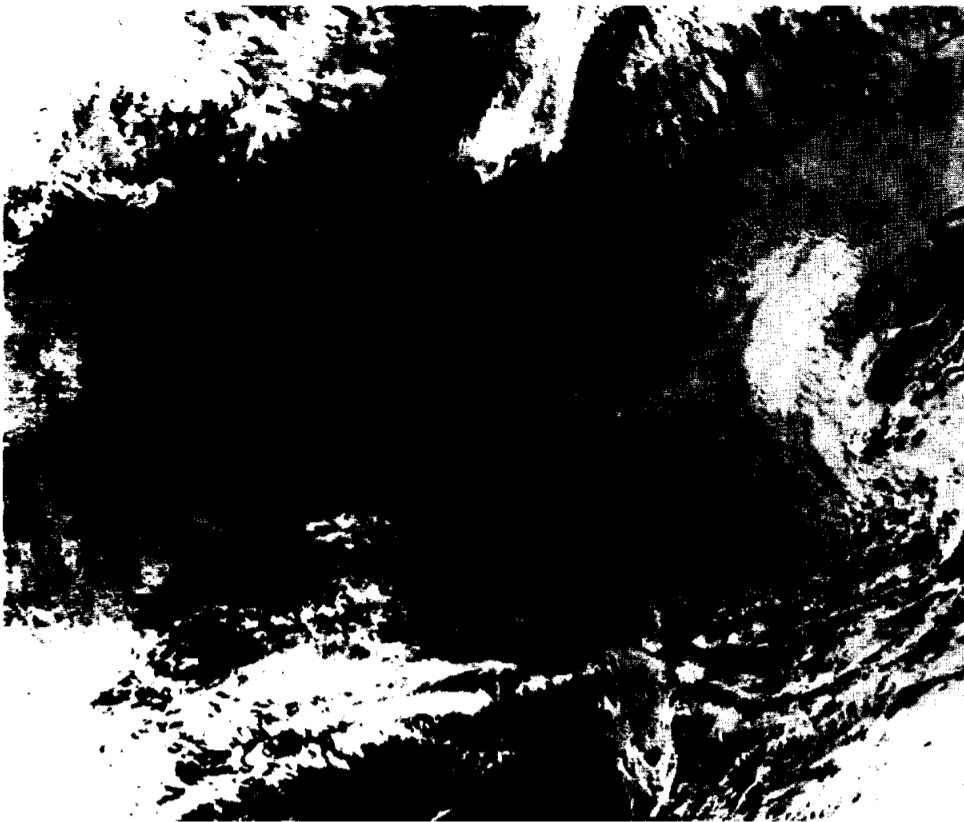
RF signal generator, heathkit. Tex Ward. 488-5445.

4' x 8' Fredrick-Willis pool table with particle board top, automatic ball return, 5 cues and stand. Good cond. \$100. Ed. X4031.

CB Johnson "Messenger" 4140, 40 Channel, LED display, ANL, PA, w/matched antenna, magnetic mount \$80 Samouce 482-0702.

CB Granada, 23 channel, PA, TR/TX meter \$35 w/matched antenna, bumper mount. \$65. Samouce. 482-0702.

Save on postage for sending Christmas cards. 70- 15c/ for only \$10. 482-5393 after 5.



**AMERICA ON A CLEAR DAY**—The photo on the left is the view from TIROS-N on October 17, four days after launch from the Western Test Range near Lompoc, California. The third generation weather satellite is returning data and pictures from a near-perfect circular polar orbit 870 km (543 miles) by 860 km (537 miles). TIROS-N gives scientists the most comprehensive meteorological information ever available, using a Very High Resolution Radiometer, an Automatic Picture Transmission system, and a High Resolution Picture Transmission system. In-orbit checkout by NASA has been completed and the satellite is now operated by NOAA. The 3,150-pound satellite was designed and built for NASA by RCA Astro-Electronics, Princeton, New Jersey, under contract to Goddard. More than 120 nations now have weather satellite stations to take advantage of the direct readout of satellite data for local use. Many developing countries are using this space technology to benefit their agricultural economies. Since 1966, when the TIROS weather satellites became operational, no major storm anywhere in the world has gone undetected.

**Demystified**

"Identify the mystery voice," said a radio announcer, and over the box came a public service announcement about pre-natal care.

Al Durocher, DCAS Property Administrator, didn't pay the contest too much mind. But later, while tuned to a news station, he heard the same voice delivering a PSA. "He said, 'Hello, this is Jack Jones,' and boom went right into the same message," Durocher said.

Durocher wrote "Jack Jones" on a postcard, mailed it right in, and won a jeweled ring and London Fog raincoat, which he'll be wearing a lot in February when he takes his trip to London which was the grand prize.

**Seasat...**

*(Continued from page 1)*

launched June 26, 1978, from Vandenberg, and controllers at JPL lost contact with the satellite on its 1,502nd orbit, October 9, 1978. A so-far unexplained short circuit drained all the power from the batteries.

After nearly a month of attempts to reestablish contact with Seasat, project officials declared the experimental oceanographic satellite mission formally terminated November 15.

**NIRA-HGAIRC?**

**Basketballs and tennis courts only part of member benefits**

Ever wonder where the basketballs come from for teams that play in Gilruth Center? Or how the exchange stores are able to sell discount theatre tickets?

Many of these benefits are a result of the Exchange Operations' membership in the National Industrial Recreation Association, specifically the local chapter, Houston-Galveston Area Industrial Recreation Council.

The group is "a professional organization," said Roy Aldridge, head of exchange operations. "As a member we are able to get information on, say, the cheapest way to build tennis courts."

By being a large group, with 50,000 plus potential customers, the HGAIRC can "command discount arrangements that JSC alone could not hope to match," Aldridge said. There are 25 employers that are active members in the HGAIRC, among them Lockheed, Rockwell, and McDonnell Douglas.

The affiliation affords employees many benefits, for example discount General Cinema tickets that are on sale now at the exchange stores. "And I'm negotiating some new deals," Aldridge said.

Often local tournaments go on to NIRA competitions and "in last year's national photo contest, JSC had a third place finisher," Aldridge said. The NIRA runs sports tournaments such as volleyball, tennis, and softball to promote recreation in member organizations.

The JSC Exchange joined NIRA when Gilruth Center was built in 1973. "As a member, we can go to a sporting goods store, for example, and get a discount on tennis balls," Aldridge said.

"NASA Exchange-JSC plans to stay active in professional associations such as this," Aldridge said. "As a result, employees will see their recreation program grow."

**Think Tank**

A M E N T A L E X E R  
M E N T A L E X E R C  
E N T A L E X E R C I  
N T A L E X E R C I S  
T A L E X E R C I S E

How many paths can be taken to spell out "A MENTAL EXERCISE"? Submit answers and methods to AP3/Roundup. The best will be recognized in the next issue.



Graphics by Russ Byther

**Drills, trucks toil in Bldg. 29**

With a rumble of drills and excavation equipment, construction of a new water immersion facility is under way in Building 29. The 58,000 cubic foot water tank will hold a full-size Orbiter mockup for Shuttle crew training in a simulated zero-g environment.

Construction, which began in July, will wind up this summer, and the facility will be fully operational in November of 1979, after equipment is moved and inspections completed.

Orbiter crews will use the tank for 2-week training periods of ten 2-hour dives. During these exercises, crew members will "perform contingency EVAs," said George Franklin of Crew Stations.

"For instance, they will run through the closing of a payload door in case the mechanism did not operate," Franklin said.

Today, construction crews are drilling 70 piers 35 feet into the ground. The piers will serve as a retaining wall and the backbone of the finished wall.

The tank will be 78 feet long, 30 wide, and 25 deep. When filled, water will hold the wall; when drained, a continuous beam around the periphery of the pool will support the structure.

Since construction began in the circular building, engineers have added a

monorail system for a single line 5-ton hoist crane and a new overhead lighting system. They have revised the structural framing of the roof for the additional load. The building used to house a centrifuge which was used for high-g testing.

Water immersion training drills currently take place in a 16 x 25 foot tank in Building 260. That tank will be demolished after the first Shuttle missions.

"The new tank is designed to take a complete trainer and fully immerse it in water," Franklin said. A model of the Shuttle trainer that will sit in the tank is on display in The Building 29 lobby.

