



## All You Wanted to Know About Earth Resources...

Remote sensing of earth resources and interpretation of geomorphology are beginning to descend from the lofty regions of pure research to the practical levels of everyday application.

As an example, the search for energy sources has led us from an overwhelming reliance on oil to a growing one with nuclear fuel. However, primary safety considerations for the siting of nuclear power plants, power transmission lines and pipelines require a thorough understanding of local geological faults. The earth resources satellites, LANDSAT I and II, are providing the necessary space color imagery required for delineation of those fault lines.

This example is but one of over a hundred innovative and economical approaches to everyday problem-solving which will be discussed in detail at the June 8-12, Earth Resources Survey Symposium to be held at Houston's Shamrock Hilton. The symposium, sponsored by the NASA Johnson Space Center and the NASA Headquarters Office of Applications, is the first to combine the results and applications of a wide-ranging selection of data from earth resources aircraft, spacecraft and satellite systems.

Earth resource planners from over two dozen different foreign countries and nearly all of the 50 U.S. states will be gathered in Houston during the conference week to transfer their technology, solutions and ideas to an estimated audience

### New Medical Library Opens

Information on how man responds to space flight has been collected and cataloged in the Space Life Sciences Archival Library which opened at NASA Johnson Space Center June 2. Housed in what was formerly the Apollo Lunar Receiving Laboratory, the Library contains data on biomedical experiments, investigations and hardware gathered in manned space flight programs.

"Although this central repository will ultimately contain information from earlier and future manned space and associated life sciences endeavors," said JSC Life Sciences Director Richard S. Johnston, "the archives presently consist of a comprehensive compilation of data obtained during the Skylab program - our most recent and extensive manned space flight experience."

The medical information stored in the Library is retrieved for the reader and viewer through a computerized system with video, microfilm and computer terminal readers and printers.

Access to the Library is available to public, private and governmental life sciences investigators.

exceeding 1,200 - representing an international cross-section of scientists, engineers, company managers, teachers, legislators and administrators.

The primary focus of the symposium is on the practical application of earth resources survey technology. In addition, scientific and technological exploratory and research investigations with promising potential applications will be featured.

Special sessions have been scheduled which relate to the state, local and regional users, coastal zone management, and user services. The sessions have been structured to include panel discussions and audi-

ence interaction.

The symposium consists of a number of mixed general and concurrent technical sessions scheduled so as to permit participants the greatest amount of flexibility in attendance. Concurrent sessions are broken into the following discipline categories: Agriculture; Environment; Geology; Information; Land Use; Marine Resources; and Water Resources.

The General Session on Monday, June 9, opens the conference. Remarks will be made at the opening ceremonies by: Russell Schweickart, Director of User Af-

(Continued on page 4)

## ASTP on Schedule

Following a recent trip to the Soviet Union, American ASTP Technical Director Dr. Glynn Lunney remarked that "all preparations for the (July) flight were in order" and that all technical issues and problems had been closed out.

Dr. Lunney's remarks were made at a Press Briefing held here at JSC, May 29. Lunney remarked that both NASA and the Soviet Academy of Sciences were satisfied that all of the work and all preparations were on schedule and "indeed we were on target for the July 15 launch."

Dr. Lunney and several members of other working groups had visited the Soviet launch site and were able to familiarize themselves with the Soyuz spacecraft and the launch operations at the Baykonur Cosmodrome. Dr. Lunney said "I think the visit to the launch site was consistent with the way the rest of the negotiations and discussions have gone with the Soviets on the ASTP program. Everything was in scope of the project, he said, "we

did not engage in any discussion, tours or visits outside of the hardware and facilities associated with the ASTP launch itself."

Dr. Lunney also said he was pleased with the recent launch and rendezvous of the Soyuz 18 and the Salyut 4 space station. In response to a press question regarding the recent Soviet launch abort, Dr. Lunney remarked that NASA was "satisfied with the explanation of the accident which occurred and the fact that we had been assured the spacecraft configuration was different and that the failure would not have any relevance to the preparations for the joint flight."

The Soviet countryside surrounding their Baykonur site was described by Lunney as "kind of West-Texas-looking, arid countryside." He said the population of the city of Leninsk was between 50 and 100 thousand and that the living quarters were mostly contained in apartment complexes. Lunney also said there appeared to be a lot of (Continued on page 2)

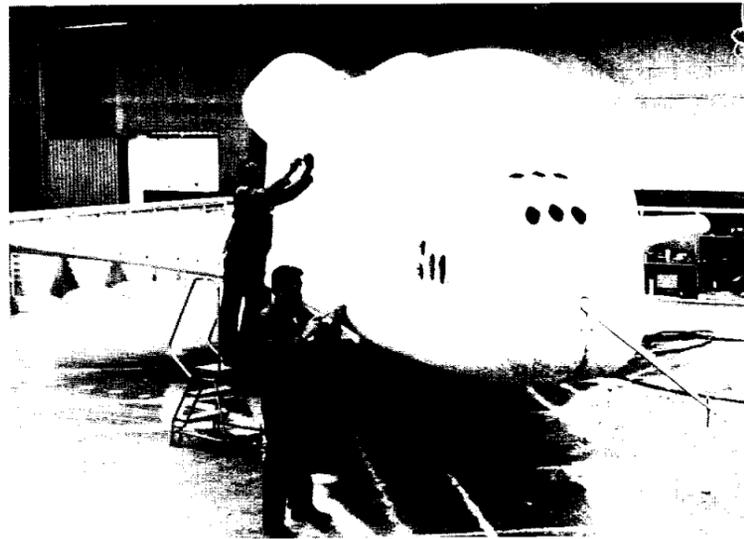


DR. GLYNN LUNNEY, American Technical Director of the Apollo-Soyuz Test Project is shown here being "made-up" by CBS Television personnel for a part in the CBS Program "Bicentennial Minutes." The "Minutes" are vignettes of history which the network airs daily. The program uses a well-known figure who recounts an incident which occurred in the American States 200 years ago. Several JSC figures will be recounting bits of Americana during the month of July, a schedule of their appearances follows: Dr. Christopher C. Kraft, July 13; Gen. Thomas P. Stafford, July 15; Donald K. Slayton, July 18; Dr. Lunney, July 20; and Vance D. Brand, July 21. Garath Davis, CBS Producer is on the left, his floor director is applying the makeup.



ASTP SYMBOLIC PAINTING by Rockwell International Space Division artist Bert Winthrop. Depicted are the launches of the two vehicles, the Soyuz on the right and the Apollo on the left bottom, and the docking in space with the 5 crewmen above that. Clockwise, the crew is Astronauts Thomas P. Stafford, US commander, Donald K. Slayton, DM pilot, Vance D. Brand, CM pilot, and the Soviet Cosmonauts Valeriy N. Kubasov, Soyuz engineer, and Alexey A. Leonov, Soyuz commander. The flight emblem is shown in the center.

## Wind Tests Set for Orbiter Model



ONE-THIRD SCALE Model of the Shuttle orbiter to be used.

A one-third scale model of the Space Shuttle orbiter is scheduled to undergo wind tunnel testing within the next several weeks in the huge forty-by-eighty-foot wind tunnel at the NASA Ames Research Center, Mountain View, California.

Purpose of the test is to gather low speed flight data in support of approach and landing tests of the first full-scale Shuttle orbiter at NASA's Flight Research Center in 1977. Another purpose is to calibrate the vehicle's air data probes. One of the largest wind tunnels in the world, the 40' by 80' (from the size of its test section, 40 by 80 feet, or 12 by 24 meters) covers an area of more than two city blocks and is capable of testing aircraft at speeds of from zero to 230 miles per hour. The tunnel is powered by six 6,000 horsepower electric motors (total 36,000 horsepower) driving 40-foot diameter wooden propellers. The tunnel was completed in 1944 and more than 100 major aircraft designs have been tested in its test section.

The wind tunnel tests are being monitored by personnel of JSC's

Engineering Analysis Division, under the supervision of the Aerodynamic and Subsystem Manager, J. C. Young. The scale model is covered with a simulated thermal protection system made from a high density styrofoam and is the same material that will cover the exterior of Orbiter 101 which will be used in the approach and landing tests (ALT) in 1977.

The overall length of the scale orbiter at Ames is 13.1 meters (43.9 feet) long, compared to 37.19 meters (122 feet) for the full scale vehicle. The one-third scale model weighs about 20,400 kilograms (45,000 pounds). It is equipped with remotely controlled elevons, body flap, and speed brake and rudder panels on which the control surface seals and gaps have been simulated.

The model was built by Rockwell International Corporation's Aircraft Division in Los Angeles. Rockwell's Space Division, in Downey, California, is developing the Space Shuttle orbiter and integrating the complete Space Shuttle system for NASA.

# W. Africans Confer on Uses of Remote Sensing Data

At a recently held earth resources conference in Bamako, Mali, the keynote speaker called remote sensing a precious guide in the search for solutions to the problems of natural resource development, especially in the problems of the recent tragic drought in the Sahel Region of Africa.

The speaker, the Honorable Mamady Keita, the Malian Minister of Industrial Development and Public Works, made his remarks at the keynote address during the Bamako conference. This was one of two remote sensing conferences held in West Africa during late March and early April. The Bamako conference was the first of the two and was planned for the French-speaking nations of West Africa. Representatives from Mali, Senegal, Chad, Zaire, Cameroon, Niger, the Ivory Coast, Dahomey and Ghana all attended as did delegates of six multinational regional authorities in the West African regions.

The second conference was held in Accra, Ghana, for English-speaking nations and was reported on in the last issue of the Roundup.

Each conference was a three-day exchange of technical and program experience and covered the basic technology of remote sensing and applications of remote sensing data. At both conferences, the host government was the sponsor with support from NASA, the US Geological Survey, the Agency for International Development and local US Embassy personnel. The US Information Agency provided organization and funding.

Bryan Erb, Deputy Manager of the Large Area Crop Inventory Experiment (LACIE) presented an overview of NASA activities in the earth resources disciplines at the Bamako conference. Mr. Erb and other speakers covered the history and basic technology of remote



NASA Representative and Deputy Manager of the Large Area Crop Inventory Experiment (LACIE) Bryan Erb is shown here with (l to r) Morris Deutsch of the US Geological Survey, and Sekou Diallo, Director of Mines and Geology, Mali, and Dr. Kasongo Ilunga Sendwe, the Director of the Zaire LANDSAT program at a recent earth resources conference in Bamako, Mali.

sensing and applications in areas such as agriculture, range and forestry land usage, geology and hydrology. Leo Childs, Earth Observations Division Special Assistant and Erb were both present at the opening of the Ghana conference. Childs presented an overview of remote sensing at the Ghana conference.

The Honorable Ralph J. McGuire, US Ambassador to Mali, opened the Bamako conference with an expression of desire from the US to make available the benefits of space technology to African nations.

Zaire was represented at both the Bamako and Accra conferences and presented plans for its prospective LANDSAT ground station to be built near Kinshasa in western Zaire. Both conferences commended Zaire for its initiative in establishing an earth resources satellite ground station. All participating nations also expressed their desires

to make use of the LANDSAT data once the Zaire station is operative, sometime in early 1976.

Minister Keita remarked at the Bamako conference that the true success of the conference was shown in the exchange of experiences and the initiation into a new technology which offered a potentially great advance for humanity with new ideas and new illumination to nourish the hopes of more adequate and effective use of earth's resources.

*This is the second of two reports covering recent earth resources conferences held in West Africa. This report covers the conference held at Bamako, Mali, and is a first-hand account as reported to the Roundup by Bryan Erb, Deputy Manager of the Large Area Crop Inventory Experiment, (LACIE).*

Now's the time to really start a sustained savings program—through the regular purchase of U.S. Savings Bonds.

## Free City Symphony Concerts

Wondering what to do on the hot, sultry nights of the Gulf Bayou country? The Houston Symphony, with a little help from the City's Parks and Recreation Dept., will perform six free concerts on June 8, 9, 10, and 30 and July 1 and 3.

Associate Conductor Akira Endo, who is known in town for his innovative approach to side-walk concerts, will lead all concerts at the following locations: June 8, Sunday, Sam Houston Park corner of Bagby at Lamar; June 9, Monday, Godwin Park, 5101 Rutherglen in Meyerland; June 10, Tuesday, Charlton Park, 8200 Park Place Blvd.; June 30, Monday, Garden Villas Park, 6720 S. Haywood Drive off the Gulf Freeway; July 1, Tuesday, Proctor Plaza Park, 838 W. Temple in the Heights; and July 3, Thursday, again in Sam Houston Park.

The programs, consisting of light classical and pops music a la Boston Pops, will begin at 8:00 p.m.

Bring a blanket!

## ASTP

(Continued from page 1)

railroad tracks crisscrossing the site and it was apparent that much of the transportation was via rail.

Dr. Lunney said there was still some work remaining, primarily detail work associated with the last-minute operations preparations for the mission.

A meeting in the second week of June will work on completion of the onboard documents — the checklists. These documents need to be brought up to date and consistent with the results of recent joint simulations and agreements.

There is also a simulation planned for the latter part of June which will involve both control centers and crews.

technical information and public affairs support services at the Lyndon B. Johnson Space Center, Houston, Texas.

The contract has an estimated cost (including fee) of approximately \$2.9 million, and is for services through April 30, 1976.

## Recent JSC Contracts

### A-V CORPORATION

A-V Corporation, 2518 North Boulevard, Houston, Texas 77006, has been selected for negotiation leading to the award of a cost-plus-fixed-fee type contract for motion-picture production for the Lyndon B. Johnson Space Center, Houston, Texas.

A-V Corporation's proposed cost and fee is approximately \$384,000 for performing motion-picture production requirements, with an estimated expenditure of 34,242 man-hours, during the initial period of performance beginning August 1, 1975, and ending July 31, 1976. The total expected cost for the 3-year program requiring expenditure of 34,242 man-hours of effort per year is approximately \$1,200,000. The contract award provides employment for approximately 16 employees for a planned 3-year program.

### KENTRON

Kentron Hawaii, Ltd., 1720 NASA Road 1, Houston, Texas, has been awarded a cost-plus-fixed-fee/award fee contract to continue

## JSC Visitor Guides Lend Personal Touch to Tours

JSC was not set up like a Disneyland, nevertheless, the Center attracts some three quarters of a million visitors per year, according to John Rantal, supervisor of Visitor Services.

A vast majority of JSC visitors come here specifically to tour the Center's facilities and besides the guards at the entrance gates, the escorts or tour guides are the only people with whom they have contact.

"Being an escort is a very unusual and challenging job that can't be measured by the number of hours you spend sitting behind a desk or on your feet, but rather by the quality of the briefings you give and the cordiality extended to the people who come out for the tours," Rantal stated.

"We have to keep in mind that anything we say or do may affect visitors' viewpoints about the space program as a whole. To them, we represent NASA and anything we say can be construed as reflecting an official NASA position. Therefore, we have a responsibility to be as well-informed as we possibly can be," he continued.



MARIA MONTEMAYOR is shown here in the MOCR describing the Mission Room to a tour group.

Five escorts are available to provide tours on a full-time basis and additional escorts work parttime. They are employed by Kentron Hawaii, the JSC contractor responsible for Visitor Services. Generally the staff conducts up to thirteen large guided tours a day.

"It really depends on the number of people who call or write for reservations," Rantal explained. He added that although the summer vacation season claims the longest consistent flow of tourists, the heaviest flow of visitors arrive at the Center during the two weeks surrounding Christmas and New Years.

According to Rantal, tour groups generally fall into two categories: large groups such as convention delegations, school students, etc; and other groups composed of small parties such as families and other individuals who call or write to reserve tours.

Usually, no more than 60 people are allowed in a single group.

The guided tour takes about two hours and covers the Mission Control Center, the Thermal-Vacuum Test Chambers of Building 32 and the high bay area of Building 5 where the Skylab 1-G Trainers are located.

"The tour gives an adequate cross-section of three of the five major responsibilities of JSC including flight control; testing and evaluation of spacecraft hardware and equipment; and astronaut selection and training," Rantal said.

He added that although the escorts are not allowed to propagandize, "we do want to be available to show people the worthwhileness of the space program and the tremendous gain that America is getting from a relatively small investment in technology."

Escort Fay Carlton summed up the feelings of the escorts by stating, "We all believe in the space program, so for us this job is a natural!"

Other escorts include Maria Montemayor, Teresa Grow, Mitchel DeWalt, Jeri Goldsmith, and Dave Hocker. Sophia Colvin is the scheduler.



FAY CARLTON as she greets JSC visitors at the Information Booth in Building 2's Auditorium.

## Boating Safety Course Set

The United States Coast Guard Auxiliary will conduct a 6-lesson Boating Safety course at the Harris County Clear Lake Park. Classes will be held in the Recreation Building next to NASA Road 1. Dates for the classes are June 6, 7, 13, 14, 20, and 27. Each class will begin at 7:30 p.m. and last for 2 hours.

This course is sponsored by Flotilla 62, Houston, Texas. It will include Safety Afloat, Boat Handling Legal Requirements, Rules of the Road, and Aids to Navigation. Films will be shown as a part of each class. Cost will be \$4.00 for materials. Certificates will be awarded for passing the examination at the end of the course.

For further details contact Earl Brownfield, ext. 2865, or 334-1383.

# Roundup Swap-Shop

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.

## HOUSEHOLD

Blk vinyl dry bar w/2 bar stools. 941-6832 after 5.  
 "Huffy" riding mower, 5 hp B/S engine, 24" adjustable height cutting blade, less than 2 hrs usage. Retail \$295.00, will sell for \$200.00. 333-4684 after 5.  
 Double bowl porcelain kitchen sink w/installation ring & fittings. \$12.00 334-2798.  
 21" RCA color TV, working cond. 488-3170/488-3377 after 5.  
 GE dishwasher \$50, 2 love seats, \$35 each, sectional couch, \$40. Exercise bike & belt, \$50, 2 full face helmets \$35 each. 946-4752.  
 Sears packing trunk, 40"x22"x22", gd cndn, \$295.00 471-3528.  
 Montgomery Wards above-the-ground pool. Approx. 8'x16'x3', incl. filter and pump. \$140.00 two yrs ago — make offer. 471-2263 after 6.

## VEHICLES

'73 Buick Regal, air, power, 40/60 seats, AM/FM stereo tape deck, steel belt radials, \$3395.00, Durst, 946-0839.  
 '69 VW Squareback. Auto, radio. All new tires. Gd cndn, \$1050.00. Akella, 488-7750, evenings.  
 1974 Pontiac LeMans, xint buy. 488-3112.  
 1973 Beechcraft Sundowner. 380 hrs engine time. Full IFR panel: dual NAV/COM, ADF, DME, TXP, ELT, glide slope, marker beacon, strobes. \$22,000 — will lease back. Jack Schmidt, 472-8908 after 5.  
 '73 Honda XL 250 street/trail bike, xint cndn, 2650 miles — \$700 or best offer. Boykin, x4476/481-0050.  
 Nimrod Riviera soft-top travel trailer, no built-ins, \$300. Terry White, 554-2916 League City.  
 '69 Pontiac Exec. St. Wgn, loaded, radials, rear overloads, gd. cndn, \$900, Erickson, 649-0396.  
 Yamaha 100cc Enduro for dirt. 1972 model, \$225. Warden, 944-2026.  
 '74 Yamaha TX500, new cndn, 4200 miles, 2 cyl-4 cycle, turn signals, elec. start, sissy bar. Make offer. L. D. White, x4405/644-3585.

For Rent: Jayco hardtop foldown camper. Kitchen, ice box, sleeps 8. Low profile pulls easy. \$57/wk, \$25/wkend. Reserve now (deposit required) Kilbourn, x4801/482-7879.  
 '73 Honda 350SL. Adult owner, 3900 miles. Must sell. Xint street and/or trail machine. Knobby tires. Small luggage rack/buddy seat. x5126/944-6513 after 5.  
 Honda CR125 xint cond., DG pipe, FWD MTD. Bdgies, ported and shaved, rdy to win races. \$650 or best offer. Leonard, 944-4997.  
 '71 VW bus, clean, gd cond, \$2350, 488-1100, Sobolik.  
 '72 Honda CL 350. Immaculate, xtras, Consider trade for small or intermediate car. C. D. Thompson, x2171/332-2229.

## BOATS

New 5 watt chnl 9 CB Transceiver, emerg. freq, perfect for car, home, boat. \$32.50. 16 ft fiberglass cabin boat, 90 hp, Johnson (new power head) Galv. BW trailer, many xtras, all xint cndn, \$1350.00 Wilson, 477-8585/x7451.  
 Century Coronado Boat 21' long 1965 Gullwing. 405 cu in Griey Marine, custom trailer, beautiful cndn. Gruby, \$3450.00 x2991 or 487-2120.  
 18 ft. Seabreeze, 1972 bowrider, 105 HP Chrys. OB, depth finder, air horns, top & curtains, xtras, galv. tilt trailer. Xint cndn, \$2900.00 333-2509.

## PROPERTY & RENTALS

House for sale: Pearland, Sherwood section. 4-2-2, two yrs old, on cul-de-sac, fenced. By owner, 485-3450.  
 Wooded lot 100'x120'. One mile Lake Livingston Dam. All util & storage unit. Equity & take up payments, or \$3,500.00 488-3170/3377 after 5.  
 Sale or Lease: Townhouse 3-2 Queens Court (Nassau Bay). All conveniences must close soon. H. M. Hughes x 5326 or 333-228.

## LOST & FOUND

Found on street in CLC, set of keys: 3 car keys, house key, and NASA desk key. x3291.

## MISCELLANEOUS

1973 Wldbk. Ency., vry gd. cond. 1974 Yrbk included — \$150.00. Kilbourn, 482-7879 or x4801.  
 RENT — Cherokee 235 IFR Trainer. 2 Nav-Comms, DME, ADF, Marker Beacon, Autopilot/Nav-Tracker. \$28/hr wet. CFII available. 334-1869 after 6.  
 Guitar-6 string Ventura w/case. Gd cond. \$65.00 Conway x3231 or 944-5719 after 5.  
 Would like to buy telephoto or wide angle lens for Argus C-3 camera. Raines, x3876 or 554-2234.  
 Thompson/Contender handgun w/ various barrels & scopes. For details call 482-7041.  
 King coronet "Tempo", silver plated. Reduced 1/3. Heberlig x6361.  
 Two saw horses — best offer. Bullock x6321 or 488-1042.

## WANTED

To buy or sell — one used radial WW tire. Sears or Michelin size 205-15 or 215-15, x3661.  
 Wanted: 26" or 27" boys 10-speed bike. 334-2180.  
 Used cab-high fiberglass or all aluminum camper cover for LWB pickup. Kersh x3611 or 554-3496.  
 2 non-smokers to join existing car pool, effective June 1. Hours 8:00-4:30, meet at Howard and Gulf Freeway vicinity. Hal Bishop x5554.

## PETS

Cairn Terrier, AKC regist. male. Carver, x2131 or 334-1765 after 5.  
 Poodle, AKC Toy, Chocolate, champ line, female 9 weeks. \$95.00. Wanted: Small pack w/frame, other hiking equip. Norris, 334-1777.  
 Bay Mare, 7 yr old AQHS-Appdx. Papers. Gentle and sound. English, Western, or games. \$350.00 — 482-7160.  
 AKC reg. 7 mo. old German Shorthair Pointer. Three from previous breeding are AKC Champs. \$75.00 334-2294.  
 FREE — Affectionate and spunky dogs, 8 wks old. Lab and Golden ancestry, but smaller. Shots included. 481-1534 after 5.

# JSC Co-Employees of the Month



CYNTHIA WELLS (FM74) AND NORMA CASTELO (JF73) are this month's co-Employee of the Month at the Johnson Space Center. Ms. Wells works in Mission Planning and Analysis Division and was cited for her consumables analysis which was instrumental in establishing the basic 9-day Apollo mission duration for ASTP. Ms. Castelo works in the Passenger Travel Section and was cited for her ability to tackle various levels of red-tape in procuring foreign travel arrangements for NASA and in saving over \$62,000 by making groups travel arrangements during 1974. Congratulations to both of these lovely NASA employees for their contribution to JSC.

# EAA Attractions

The champions of the 1974-75 EAA Recreational Basketball Tournament are the Hang-Overs sponsored by the NASA Exchange.

The first-place team members are: Bobby Bailey, 6-foot-6 forward, Leon Ballinger, 5-foot-9 guard, Maurice Carter, 5-foot-11 guard, Charles Cone, 6-foot-3 center, Earl Foley, 6-foot guard, Johnny Garrett, 6-foot-4 forward, Glenn Johnson, 6-foot-3 guard, center and forward, James Lott, 5-foot-9 guard, Vick Murray, 6-foot-3 center, Henry Smith, 5-foot-11 guard and team captain, Al Wilson, 6-foot guard, and Gregg Wycliff, 6-foot-5 forward.

Carrying a 14-0 record into the Class B tournaments the winners of the Thursday Night League met and defeated the Chugs, a small team big in speed and tenacity; the experienced and deliberate Brewers; and the undefeated Rads, possibly the best shooting squad in the tournament.

Facing Morris William's perennial power, Klute-Holt, also undefeated during the regular season, the Hang-Overs, led by Johnny Garrett, Gregg Wycliff, Glenn Johnson, and Vic Murray, were able to overcome a 12 point first half deficit to gain a 97-68 tournament victory. This enabled the Hang-Overs to finish the season with a perfect 18-0 record.

Team Captain Henry Smith attributes the Hang-Overs' perfect season to: 1) the shooting, defensive and rebounding strength of Garrett, Johnson, Wycliff, Murray, Cone and Bailey; 2) the excellent floor play of Foley, Wilson, Lott, Ballinger, Carter and Smith; 3) excellent team speed, maneuverability and depth; and 4) a basic affinity for basketball and team-spirit from the Hang-Overs themselves.

The Roundup wishes to congratulate the Hang-Overs for their 18-0 perfect record for the 1974-75 basketball season.

## EAA CONSIDERING SUPERSTARS COMPETITION

Preliminary planning for a JSC EAA team superstars competition is underway. Patterned after the professional sports program, teams would compete in the following activities: (1) Tug-O-War; (2) Tennis; (3) Distance Relays; (4) Softball; (5) Volleyball; (6) Basketball; (7) Ping-Pong; (8) Horseshoes; (9) Badminton; and (10) 100-Yard Dash. Competition will begin in July, with finals scheduled for completion in September — possibly at the NASA Picnic. Form your teams now and contact Jack Boykin, EG2, Ext. 4476, for further planning information. Present planning is to limit entries to 10 teams, so don't delay.

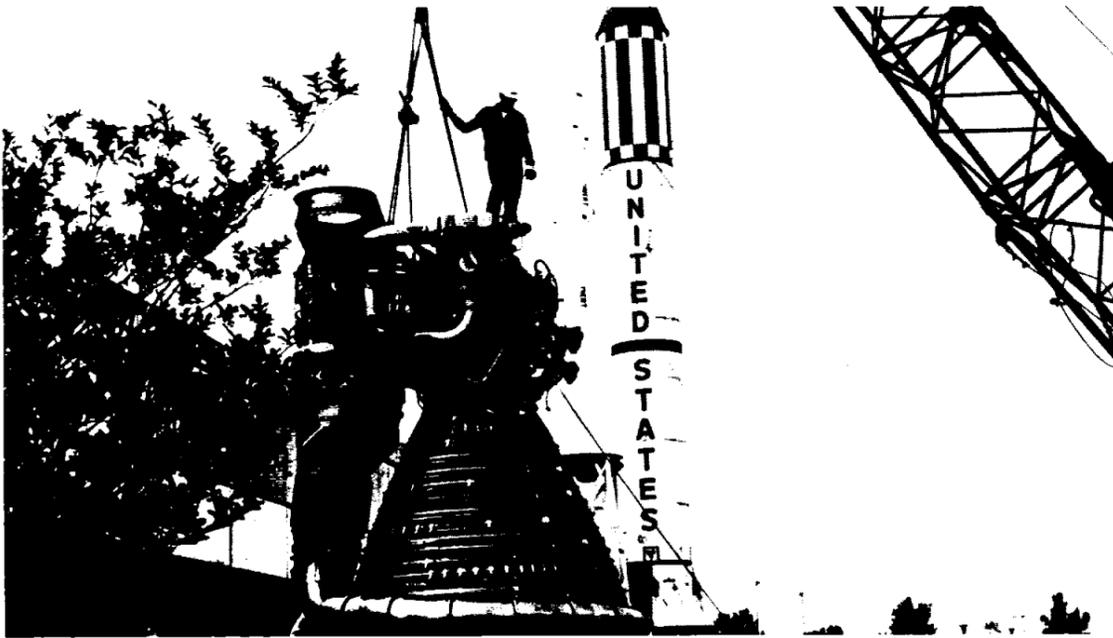
## Competition

The EAA Competitive Basketball Title goes to the Association again. Bob Merriam's 15-foot jump shot with only 2 seconds remaining in double overtime carried the Association to a 53-52 victory over the defending champion Blue Devils to capture their seventh league title in the last eight years. Team members are Larry Ratchiff, Ken Young, Tom Jenkins, Richard Kruse, Bob Merriam, Phil Shannahan, Kevin Snedecor, Jerry Shinkle and Nellie Costin. The Roundup wishes to congratulate the Association for their long-standing lead in the competitive league.

## Cape

If you're planning on attending the last Saturn IB and Apollo launch at the Cape, don't drive to the launch site yourself, let the Cultural Club handle the car pass problems for you. Join the Cultural Club at the Langford Hotel at the Cape and be bussed to a prime launch viewing area. For details on this to-the-launch buspool contact Esther Washington at ext. 2861.

# F1 Display Replaces LM



Out with the old ... in with the new (relatively speaking).

The display area outside building 2 is sporting a new exhibit. An 18,500 pound F1 engine completes the "family" of engines there. It is the largest of the engines on display, being 19 feet tall and 12 feet, 4 inches in diameter.

Five F1 engines powered the

first stage of the Saturn V launch vehicle. Each engine has a thrust of 1.5 million pounds and burns 40,282 gallons of propellant per minute for about 2½ minutes.

The exhibit was first seen at the 1970 World's Fair on Osaka, Japan and was then shipped to Marshall

Space Flight Center, where it has been in storage. The F1 is on loan from the Smithsonian Institution and was requested because JSC has the "family" of engines to which it belongs.

The "family" includes the RL10 engine, which was used with the Atlas Centaur; the J2 engine was used in the second and third stages of the Saturn V, and the H1 was used with the Saturn 1B launch vehicle.

The engine on display has been fired in a test. The F1 engine has a flight reliability of 100 per cent out of all the engines which have been produced and fired to date.

# ROUNDUP

NASA LYNDON B. JOHNSON SPACE CENTER HOUSTON, TEXAS



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 JSC employees.

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# All You Wanted to Know

(Continued from page 1)

fairs, NASA; Charles W. Matthews, Associate Administrator for Applications, NASA; Dr. Werhner von Braun, vice president of Engineering and Development, Fairchild Industries; Dr. Christopher C. Kraft, Director of the Johnson Space Center, NASA; and William E. Stoney, Director, NASA Earth Observations Program.

Concurrent sessions begin on Monday at 12:30 and continue through Wednesday noon. On Thursday the Keynote Address will be presented by the Honorable Caspar Weinberger, Secretary of the Department of Health, Education and Welfare. Thursday afternoon several special papers will also be presented: Remote Sensing Programs of the Interior Department; U.S. Army Corps of Engineers Programs; the NASA Large Area Crop Inventory Experiment (LACIE); International Aspects and Potentials of Earth Resources Programs; and the Future Remote Sensing Programs.

Organizations planning exhibits at the symposium include many old-line remote sensing organizations and a surprising assortment of new companies. The exhibitors include: Lockheed Electronics Company; the Earth Resources Institute of Michigan (ERIM); the Earth Satellite Corporation; Purdue University; Grumman Aerospace Company; Itek Corporation; Bausch and Lomb Company; NASA; Eastman Kodak Company; the American Society of Photogrammetry; the General Electric Company; Martin Marietta; the Bendix Company; Hughes Aircraft; IBM; Honeywell Incorporated; and many others.

In addition to activities at the Shamrock, the conference coordinators have also arranged for two daily tours of the Johnson Space Center.

A synopsis of selected symposium papers follows:

A Minnesota team will present material on the use of LANDSAT data used by the state to economically map open-pit mining and mineland reclamation projects in

northern Minnesota. The U.S. Army Corps of Engineers will be addressing the subject of economically-produced environmental quality maps produced through use of LANDSAT imagery.

Several different organizations and presenters will be discussing the impact of remote sensing on the economy and environmental studies of Alaska. Spacecraft and satellite images are the basis for a statewide survey being done in Alaska concurrent with the trans-Alaska pipeline.

The Canadian Forest Service will describe the advantages of using remote sensing data in estimating clear-cut areas of heavily forested regions of the British Columbia countryside.

The level of defoliation experienced by wooded areas following insect infestations will be the subject of a paper from a team of Pennsylvania forest experts. The LANDSAT data has proven to be an accurate means of early estimation of tree damage according to their paper.

Both the General Electric Company, manufacturers of an advanced image enhancement system for remote sensing data, and NASA will be discussing the probability of using remotely sensed data to accurately and economically predict crop yields. NASA will be discussing the LACIE project during a special paper on Thursday.

NASA will also be discussing the applications of remote sensing in improving health climates for both man and animals. In separate papers NASA will present data on an advanced method of pinpointing an airborne pest to reduce the cost of the sterile-mate method of extermination and will also present a paper on the use of high altitude imagery to predict health levels in urban areas.

The USGS will present a paper on the application of LANDSAT multi-band data in the preparation of large-area photo mosaics of Saudi Arabia to assist in that country's economic development.

The state of Ohio will explain their statewide land-use inventory

and the economical manner by which it can be updated using LANDSAT data. The state will be talking "dollars-and-cents" when it compares their 15-year-old land-use master map which cost the state more in 1960 than the update will cost in 1975.

NASA Goddard and GE will present a joint paper on a hydrologic mapping project involving the Patuxent River watershed basin in peninsular Maryland. According to this paper, hydrologic theme maps were produced which compared with the existing watershed maps at a theme-mapping cost of about \$4.30/kilometer squared.

Similarly the Department of Water Resources, California, will present a paper in which the state compares conventional and remote sensing means of monitoring water resources. California reports that the satellite-acquired data is more cost-effective for certain kinds of image collecting considered too expensive for conventional methods.

The Weather Bureau, NOAA, will present a paper describing the applications of LANDSAT data to snow mapping, claiming that the accuracy with which the areal extent of snow can be delineated using satellite imagery is totally unprecedented. This has tremendous implications for agriculture in the American Mountain West and in the India-Pakistan-China area of Asia.

## Free Houston Concerts

TICKETS AVAILABLE  
Building 11 - Exchange Store

### SPORTS

Houston Astros Baseball - \$3.15 Reserve and \$4.00 Box (Regular \$3.50 and \$4.50)

### SPECIAL PLACES OF INTEREST

Sea Arama - Year Around - Adults \$3.00 and Children \$2.00 (Regular \$3.75 & \$2.75); Disney Magic Kingdom Cards - FREE; Lion Country Safari Cards - FREE; Six Flags Discount Cards - FREE.

### DINNER THEATRE

Dean Goss Dinner Theatre - \$16.00 Couple (Regular \$20.00) - A Brand New Show "KISS OR MAKE UP".

Windmill Dinner Theatre - \$14.00 Couple (Regular \$20.00) - Only 30 Tickets Available - Tickets will go on sale for the new show June 9, 1975. "The Owl and the Pussycat", starring Sue Ann Langdon ... The show will run June 10 thru July 13 ... Make your reservations Now ...

### OTHER ATTRACTIONS

Astroworld - All tickets \$4.50 (Regular Adults \$6.50 and Children \$5.50); ABC Interstate Theatre - \$1.50.



WYLIE BEAL, ARTIST

## Wylie Beal: A Not-so-hidden Talent

Residing in an obscure office in the Software Division of Building 30 is a man of unusual creativity and talent.

Wylie Beal is an artist - a painter of canvas and a creator of wild and wonderful hodge-podes of paint, mechanics, scrap metal and other assorted mediums. Wylie believes in using anything and everything in his art to portray man and the world around him. Wylie has shared his creations with fellow employees by displaying his work in various offices on site.

Wylie has been in Mission Planning at JSC since 1963. His background is engineering, which has developed into his present work in the Software Division. He has been an artist all his life and as his vocation has changed and developed, so has his art and technique. His vocation is reflected in his art and his philosophy of life is built around the intermingling of his technological and artistic skills.

One of his pieces of art is a classic example of Wylie's philosophy. The work shows the technological orientation of man as compared to the artistic side of man. Wylie says, "In this community we have an abundance of the technology side of man. We're very much in need of the other, artistic, side of man." He and his wife agree on the idea that as man becomes more intelligent, the artist and the scientist come together to make a more complete man. However, in spite of this idea, Wylie feels that man needs to experience more art through the beauty of the world around him.

Wylie believes in painting what he sees and feels, as well as in creating feeling and satisfaction for his viewers. His art is full of texture to touch and color to fill the eyes. His art appeals to the whole person and must be appreciated up close as well as far away.

How did Wylie start bringing his art to JSC for display? It happened back in 1968 about the time of the Gemini missions. Tourism was increasing at the Center and Wylie and some fellow employees felt that the lobby of Building 30 looked a bit "like a bus station" and needed something to liven it up for the tourists who waited there for the tour of Mission Control. After asking around, they were granted permission to put some artwork on display. "Space type" paintings were solicited from friends and employees and a selection of art was put on display in the lobby.

Since that initial display of his art, Wylie has taken pride in displaying his work in many offices on site. He feels that JSC is a "wasteland as far as art" and is doing his part by "giving to the artistic poor." He has urged his friends and fellow employees to display their artistic talents too. He says that "most people won't take the chance to be laughed at", but the true artist takes that chance and often learns to laugh himself.

Wylie would like to see more emphasis on the arts here at JSC. He feels that a "program to help stimulate interest and pride in personalizing work areas would be beneficial in brightening up our world". His idea is that if the working area is a pleasant place then the employee will be more productive and happier with his job as a result.

Art is not an expensive hobby for Wylie. Most of the material he uses, other than paint, has been scavenged from any number of sources. Wylie puts many hours into the planning of a painting and will often only spend an hour or two on the actual work. He paints fast and will work on several pieces at the same time.

Betsy Godfrey



ASTRONAUT CHIEF CAPTAIN JOHN YOUNG and Edward A. Vincent, Boeing Company code HS05. Cpt. Young is shown awarding Vincent the Astronaut Silver Snoopy award for professional excellence. Vincent was given the Snoopy for his work during the Docking System Verification Tests which were recently performed in Moscow to verify the capability of both docking systems to mate properly.



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