



# ROUNDUP

NASA LYNDON B. JOHNSON SPACE CENTER

HOUSTON, TEXAS

VOL. 17 NO. 3

Friday, February 17, 1978

## Antarctic meteorites arrive for analysis

JSC has begun a new program for receiving and processing rare and pristine meteorite samples. Until quite recently a special program for meteorites has not been needed because the meteorite fragments found had been contaminated by reactions with the soil where they fell, by the effects of weather, and by the often unsterile handling conditions once they had been recovered.

The new meteorite facility will handle a new, near-pristine, meteorite collection found this winter near McMurdo Station, in the Antarctic.

The first meteorite samples arrived at JSC February 11, and were two 200-300 gram (baseball-sized) fragments believed by the National Science Foundation to be rare carbonaceous chondrites. These two samples could contain evidence of

primordial matter from our solar system.

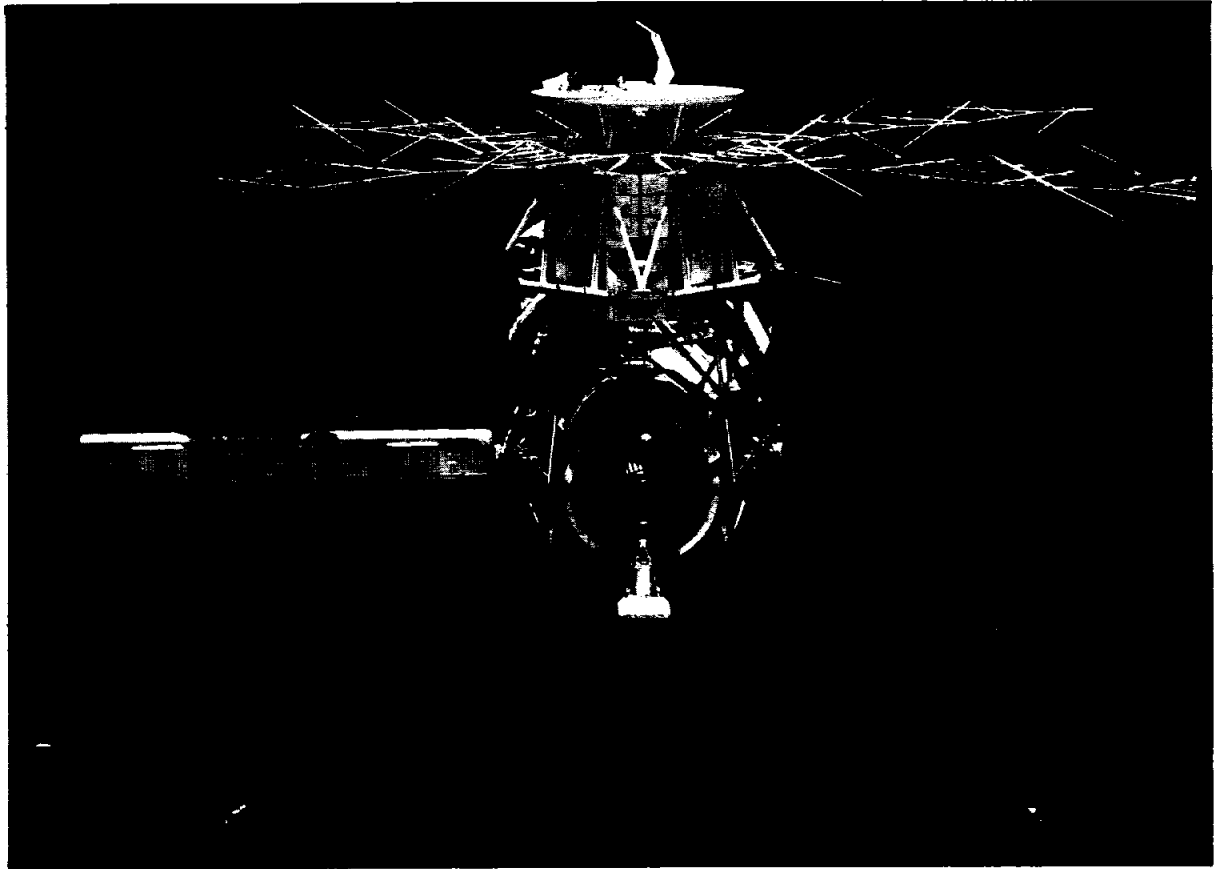
The samples were found on the Antarctic ice shelf by Dr. William Cassidy, a University of Pittsburgh geologist working under a grant from the NSF. Cassidy hypothesized that very large finds of meteorites might be discovered in areas of the Antarctic where ancient, "blue ice" was raised to the surface. Cassidy suggested meteorites which fell on Antarctica in centuries past could appear on the surface along with the ice.

The exact manner by which the ice and meteorites move to the surface from beneath hundreds of feet of snowpack is not well understood; however, Cassidy found 310 meteorite fragments in a two-month period this past December and January. Cassidy feels the fragments represent between 20 and 50 different meteorites. This is the most concentrated find ever collected. There are at present fragments from an estimated 2,000 meteorites which have been found. Because of the exceptional preserving conditions in the extreme cold and dry environment of Antarctica, the 310 samples which Cassidy found are considered the most uncontaminated, near-pristine meteorite samples ever collected.

To insure that the samples would be collected properly, the NSF and JSC Lunar Curatorial Facility, equipped Cassidy with special sterile equipment used to handle the lunar sample collection.

The meteorite processing facility at the space center will receive the samples and, using glove-boxes first used to handle material from the moon, will document the samples and make initial characterization studies of the fragments, which will be weighed and photographed.

A special committee comprised of members of the NSF, the Smithsonian Museum of Natural History, NASA, and Dr. Cassidy's team is expected to produce a detailed plan for a more systematic examination of the samples.



**SPOOKY SPACE STATION** - Four years ago Skylab looked like this as the third crew of Jerry Carr, Ed Gibson and Bill Pogue made a final fly-around before returning home. Orbital lifetime was predicted at 10 years in February 1974 when the Skylab Workshop was left in a 237-nm circular orbit, but atmospheric drag is causing the orbit to decay.

## Yule shutdown saves a bundle

Energy valued at \$42,567 was saved by the 1977 JSC holiday closing between Christmas and New Year, according to figures disclosed by JSC Center Operations. About 2930, or 85 percent of civil service employees opted to take four days' leave between the two long weekends for a savings of 1,190,120 kilowatt-hours of electricity and 6,680,000 cubic feet of natural gas over the 10-day closing.

JSC management has decided to repeat the closing during 1978 year-end holidays, and will include the Friday after Thanksgiving as well as December 26-29.

## NSA program homes in on current culture

For the National Secretaries Association (International) (NSA) sixteenth annual February Program of the Year in 1978, members will focus on the topic of Contemporary Culture.

According to Georgia Yawn, CPS, and President of NSA's NASA Clear Lake Chapter, the 1978 Program of the Year meeting will be held here on Tuesday, Feb. 28, in the Prince Room of the Sheraton Kings Inn. The social hour will begin at 5:30, dinner at 6:00 (cost \$6.00), and the program at 7:00, with the business meeting to follow. Reservations should be made to Geraldine Taylor (X-4303) or Rachel Windham (X-3831) prior to Friday, Feb. 24. Visitors are invited to attend the meeting. There is no charge for the program; however, reservations should be made to ensure adequate seating.

## Ways to reboost Skylab examined as space station's orbit wears out

The latest data on the orbit of the Skylab Workshop indicates that it will have descended to 150 nautical miles (173 statute miles, 278 kilometers) altitude and could begin reentry into the Earth's atmosphere as early as late summer of 1979 and as late as the second quarter of 1980.

NASA bases its prediction on data provided by the North American Air Defense Command's (NORAD) satellite tracking organization, the Smithsonian Astrophysical Observatory, and the Swiss Federal Observatory.

NASA is working on plans that may extend the Skylab reentry time, such as reactivation of the Skylab Workshop's thruster attitude control system (TACS) to cause it to go into a very slow tumble which would decrease the atmospheric drag and perhaps add several months to the orbital lifetime. NASA will attempt this in spring of 1978.

In addition, the launch of a Teleoperator Retrieval System (TRS) on an early Space Shuttle mission, about October 1979 is being examined. The TRS would be carried into orbit by the Shuttle, removed from the Shuttle payload bay and flown by remote control to dock with Skylab. Once docked, a propulsion system on TRS could be operated either to raise the Skylab orbit or to cause it to reenter the atmosphere in a controlled fashion to a remote ocean area of the Earth below. (TRS is part of NASA's Fiscal 1979 Budget proposal now before the Congress.)

Skylab is the largest payload in Earth orbit. It weighs 85 tons and is about 96 feet long. The main portion is cylindrical, 22 feet in diameter.

Skylab on descending into the Earth's atmosphere is expected to break up and burn during descent. Some debris is expected to survive the reentry and reach the Earth's surface. It is probable that any surviving debris would land in an ocean since 80 percent of the Earth beneath the Skylab orbit is water. In orbit, Skylab is passing above the area of Earth between 50 degrees north and 50 degrees south latitude.

Skylab was launched in May 1973 and was manned during three missions by three different astronaut crews. The last crew departed Skylab February 8, 1974 at an altitude of 237 nautical miles (273 sm, 440 km). Skylab presently is 220 nautical miles (253 sm, 408 km) above Earth.

At the time the final crew departed NASA estimated that the

orbiting workshop would remain in space until 1983. However, since that time the orbit has decreased at a higher-than-anticipated rate and NASA has been adjusting its predictions from time to time. Contributing to the more rapid rate-of-descent is an increase in atmospheric drag which in turn is caused by sunspot activity.

## Credit Union meets Friday

The Annual Meeting of the JSC Federal Credit Union will be held on Friday, Feb. 24, at 7:30 p.m. in the Building 2 auditorium.

Elections to fill three positions on the Board of Directors and two positions on the Credit Committee will take place on that day. Polls will be open at 9 a.m. in the lobby of the JSC Credit Union and will remain open until 3 p.m. at which time they will be moved to the lobby of the Building 2 auditorium and open again at 4 p.m. They will remain open until 7:30 p.m., when the annual meeting will be called to order.

The following candidates have been selected for your consideration:

**Board of Directors (3 positions open)**  
Jerry D. Haptonstall, Thomas F. Krenek, Rae Chambers, Paul M. Sturtevant, Burney H. Goodwin, James A. Stephens  
**Credit Committee (2 positions open)**  
Curtis C. Collins, Helon Crawford, James McBride

Candidate writeups are posted in the lobby of the JSC Credit Union.

## DFRC's Gillam speaks at Black History forum

Acting NASA Dryden Flight Research Center Director Isaac T. Gillam today will be the featured speaker in the second day of JSC's observance of National Black History Month. Gillam will speak at 1 p.m. in the Bldg. 2 Auditorium. Dr. Julian Earls, chief of the NASA Lewis Research Center's Environmental Health Office, will also speak.

Following a central theme of "Roots, Achievements and Projections," Thursday's program included performances by the Jesse H. Jones high school Golden Voices concert choir, a drama group from M. C. Williams high school, and the Texas Southern University Jazz Ensemble. The keynote speaker was Dr. Robert Bell, Jr., head of Rice University psychology department.



'T WAS A COLD AND WINDY DAY — The ultimate in practical use of the space-suit was displayed last month when a gardener, shown driving his vehicle, was seen suited up for the weather.

## Gammage speaks at ISA meet

U.S. Congressman Bob Gammage will be addressing the Instrument Society of America (ISA), Clear Lake-Galveston section, at a noon-held minisymposium. His topic will be "Opportunities in Instrumentation and Government Policies on Energy."

The luncheon will be held at the Gilruth Recreation Center. Details are given in the table below.

### ITINERARY

11:30 Luncheon, \$5.50. RSVP Betty Steinkneher, 488-5660, X-228.

12:00	Speaker: Bob Gammage
12:30 - 1	Registration at UH/CLC: \$1, ISA members \$2 non-members
1:00	Session I, "Transducers and Primary Process Loop Elements" (3 papers)
2:30	Session II, "Microprocessor-Based Systems" (4 papers)
4:00	Session III, "Advances in Avionics" (4 papers)

Three sessions are scheduled for the afternoon and will be presented at the neighboring University of Houston at Clear Lake (UH/CLC). Energy-related exhibits will be set up in the atrium of the campus' Bayou Bldg. Optic sensors, density meters, microprocessor controlled systems, alarm and shutdown systems, and multiplexing techniques are but a few of the papers chosen for the presentations designated for the afternoon sessions.

Copies of the abstracts will be presented to all in attendance. For further information, contact Dr. Sarwar Naqvi, 488-5660, X-238 or Joe Canniff, X-2391.

## Golfers hold first '78 meet

The first tournament of 1978 for the JSC Golf Association (JSCGA) will be played Monday at Texaco. The format will be a best-ball scramble with the player whose shot is selected not allowed to hit the succeeding shot. Teams and tee-times were posted today on the bulletin boards in both cafeterias.

Although too late for Texaco, the JSCGA is still accepting memberships. The first of our nine medal-play competitions will be played March 11 at Glenbrook. The other courses we will play this year are Wortham, Brock, Texas City, Tejas, Newport, Columbia Lakes, Sunmeadows, Inwood Forest, and Lake Houston. Membership application forms must be returned by Tuesday, Feb. 28.

For information or application forms, call Bob Sampson at X-2161.

## Quarterly seeks space writings

The editor of the *Michigan Quarterly Review* is seeking "essays, memoirs, poetry, graphic works — writing in any literate form — that will illuminate the last decade of space consciousness."

Planned for publication in the Spring 1979 *Review*, the material will follow a central theme of "the moon landing and its aftermath." Editor Laurence Goldstein says that he is "looking for work that is thoughtful, original, a new perspective on a much publicized event. Not public relations material but creative, individual responses."

Deadline for manuscripts is November 1, 1978, and manuscripts should be accompanied by a stamped, self-addressed envelope. Length limit is around 30 typed pages, and payment on acceptance by the *Review* will run \$5 to \$8 a printed page.

Mail manuscripts to Laurence Goldstein, *Michigan Quarterly Review*, 3032 Rackham Building, Ann Arbor, MI 48109.

## Top Secretary award unique

Probably the most novel form of recognition and certainly the most competitive award presented by JSC is the Outstanding Secretary Award. Although tailored after an annual secretarial award made by another Government agency, the award is not duplicated elsewhere within NASA nor to our knowledge is it presented in a similar fashion by any other Government agency. The award, which is ordinarily presented monthly by the Center Director, consists of an attractive desk plaque and a cash award of \$100.00.

Four times a year, a committee made up of the Special Assistant to the Center Director for Management, a division chief, and a former secretary recommend award recipients to the Director. Their selections are made from nominations received by the Awards Office from division level and other Center organizations. Normally, the Committee reviews between 15 and 30 nominations at each meeting in order to recommend three recipients to the Director to receive awards during the next three months.

Even to be proposed for the Outstanding Secretary Award indicates that an employee is considered to be exceptional by her supervisor. The criteria indicates that an employee must have demonstrated excellent performance in a one-time accomplishment or in a continuing responsibility that has contributed significantly to the operation of the Center during the previous year. While the duties must be generally secretarial in nature, an employee who carries the job title of clerk, clerk-typist, or clerk-stenographer may be considered for the award along with others nominated who are officially classified as secretaries.

## Would-be cartoonists, arise!

Do you have DRAWING talent? A flair for the satirical, or the ability to see the humorous side of otherwise overpowering circumstances? Or, at the most inopportune moments, do you often come down with a condition commonly known as "the sillies?"

If you are one of these rare people who are able to take a moment and laugh at yourself or your problems, you may be just

## Study group hears talk on Mid-East

"The Changing Middle East" will be the topic of Dr. Donald Quataert when he speaks Tuesday at the University of Houston-Clear Lake. Third in the Great Decisions '78 foreign affairs study program open to Clear Lake area people, Quataert's talk will be at 7:30 p.m. February 21 in UofH-CLC room 2-508.

The discussion will include an analysis of interest conflicts among parties involved in the Middle East that tend to complicate a comprehensive settlement. Quataert is professor of Middle East history at the UofH central campus.

"The Dilemmas of World Energy," an analysis of foreign policy implications of energy requirements and sources, will be the February 28 topic. The State Department is providing a speaker.

what the *Roundup* needs as a potential space cartoonist!

Draw your cartoon, with or without caption, as appropriate, and mail it to the *Roundup* editor, AP3. Due to the volume of mail received in this office and the time mail sometimes takes to get to its destination, there is no guarantee as to which issue your cartoon may appear. But, if selected, your cartoon will be whipped into tip-top shape and placed in the paper with your name, as you wish for it to appear, in the bottom right-hand corner, so be sure that your signature there is visible enough to be reproduced. Be sure your cartoon is original to avoid obtaining approvals.

## Cook picked tall tale teller

The Toastmasters Spaceland Club will be represented at the Division Tall Tales Contest by Toastmaster Gene Cook. Cook qualified for the Division contest by winning first place in the Spaceland's Tall Tales contest held on January 25 at the Bonanza Restaurant. Second and third place were captured by Toastmasters Clareen Kunert and Benny Baker.

The Spaceland Club recently installed new officers. Serving are Marilyn Bockting, President; Elaine Stemerick, Editorial Vice-President; Gene Cook, Administrative Vice-President; Darrell Boyd, Treasurer; Clareen Kunert, Secretary; and Franklin Williams, Sergeant-at-Arms.

## ROUNDUP

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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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## What's cookin' in cafeterias

WEEK OF FEB. 20 - 24

WEEK OF FEB. 27 - MAR. 3

**MONDAY:** Beef & Barley Soup; Beef Chop Suey; Veal Cutlet w/Cream Gravy; Grilled Ham Steak; Weiners & Baked Beans (Special); Brussels Sprouts, Mixed Vegetables. Standard Daily Items: Roast Beef; Baked Ham; Fried Chicken; Fried Fish; Chopped Sirloin; Selection of Salads, Sandwiches, and Pies.

**TUESDAY:** Cream of Celery Soup; Turkey a la king; Frito Pie; Pork Chop w/Apple Sauce; Chinese Pepper Steak (Special); Spinach, Buttered Squash, au gratin Potatoes.

**WEDNESDAY:** Cream of Potato Soup; Catfish w/Hush Puppies; BBQ Plate; Braised Beef Ribs; Mexican Dinner (Special); Broccoli, Peas, Ranch Beans.

**THURSDAY:** Green Pea Soup; Corned Beef & Cabbage; Chicken & Dumplings; Tamales w/Chili; Hamburger Steak (Special); Green Beans, Cabbage, Navy Beans.

**FRIDAY:** Seafood Gumbo; Deviled Crabs; Liver w/Onions; Halibut w/ Lemon Sauce; BBQ Smoked Link (Special); Corn, Italian Green Beans.

**MONDAY:** French Onion Soup; BBQ Beef; Parmesan Steak; Spare Ribs w/Kraut; Chili & Macaroni w/Salad (Special); Ranch Style Beans; English Peas, Mustard Greens. Standard Daily Items: Roast Beef; Fried Chicken; Fried Fish; Baked Ham; Chopped Sirloin; Selection of Salads, Sandwiches, and Pies.

**TUESDAY:** Split Pea Soup; Meatballs & Spaghetti; Liver w/Onions; Baked Ham; Corn Beef Hash (Special); Buttered Cabbage, Cream Style Corn, Italian Vegetables.

**WEDNESDAY:** Seafood Gumbo; Cheese Enchiladas; Roast Pork w/ Dressing; Oven Crisp Flounder; BBQ Beef Plate; BBQ Link (Special); Pinto Beans, Spanish Rice, Turnip Greens.

**THURSDAY:** Beef & Barley Soup; Roast Beef w/Dressing; Baked Flounder; Lasagna w/Meat; Chicken Fried Steak (Special); Peas & Carrots, Buttered Squash.

**FRIDAY:** Seafood Gumbo; Fried Shrimp; Broiled Halibut; Beef Stroganoff w/Noodles; Fried Chicken (Special); Breaded Okra, Buttered Broccoli, Carrots in Cream Sauce.

# EAA ATTRACTIONS

## TICKETS

The following tickets are available at the Bldg. 11 Exchange Store from 10 a.m.- 2 p.m. Monday - Friday. **NO REFUNDS ON ANY TICKETS.**

**Dean Goss Dinner Theater** - The comedy play "Accommodations" is now featured at the Dean Goss Dinner Theater. Tickets are now being sold for \$16 per couple or \$8 per person.

**Disney Magic Kingdom Club** - Free membership cards.

## HOUSTON AERO HOCKEY

Houston Aero Hockey tickets are on sale at the special rates of \$6.50 and \$4.00 through EAA.

Houston Aeros gift cards will be sold in Bldg. 11 to EAA members, who in turn may exchange them at the Aero's Box Office.

The Aeros are hot, with six wins in a row and in third place.

Upcoming home games are with Cincinnati Feb. 17, Edmonton Mar. 7, and New England Mar. 9.

## AERO CLUB

The JSC Aero Club will have a meeting in the Gilruth Recreation Center on Thursday, Mar. 2, at 5 p.m. Visitors welcome!

The Club has three aircraft for use by members: A Cessna 150 at \$13.50 per hour, a Cessna 172 at \$18.00 per hour, and a Bonanza at \$29.00 per hour.

There are several openings for members currently. Now would be a good chance to learn about the Solo Course and the advantages of flying with the JSC Aero Club.

## DEFENSIVE DRIVING

The next defensive driving course will be offered around the last of March. Details will be published as they arrive, probably in the next *Roundup* issue.

## LIVESTOCK SHOW

The Houston Livestock and Rodeo Show on Feb. 24 & 25 and Mar. 3 & 5. Sales end Mon., Feb. 20.

## JSC-EAA PICNIC

The JSC-EAA Picnic this year will be on May 6 at Camp Manison. The picnic committee decided that a change of scenery might bolster the sagging attendance of the last few years.

In addition to the usual food, beverages, and concessions, Camp Manison offers swimming, hayrides, trampolines, covered pavillion and other attractions.

Reserve May 6 on your calender for the JSC-EAA 1978 Picnic! Tickets will be on sale soon at the Building 11 cafeteria. Adults: \$3.00 and children: \$2.50.

## SOFTBALL

Weather permitting, the 1978 Softball Season will start the week of March 27. There will be Mens', Womens' and Mixed Leagues provided in all areas. Sign-up will be Mar. 6 through 5:00 p.m., Mar. 16. Fees are as follows:

	Non EAA	EAA
Mens' A	\$115.00	\$60.00
All other	\$ 90.00	\$45.00

Roster forms and league rules are available at the Gilruth Center. The sign-up period will start with a managers meeting on March 6 at 6 p.m. in Room 204.

## SOFTBALL UMPIRES

An umpires school will be held Mar. 6 and 8. All non-ASA officials will be required to attend both classes: 7 p.m., Mar. 6th; 6:30 p.m., Mar. 8, and then pass a written test given at 7 p.m. on the 8th. Officials already sanctioned must attend only the 6:30-7:00 p.m. portion of the Mar. 8 meeting. Umpires interested in working for the Gilruth Facility should contact Tim Kincaid at X-3594.

## ASTROWORLD SPECIAL

The EAA will sponsor a JSC day at Astroworld on Sunday, Mar. 12.

Tickets for that day only will be half price: \$4.25 instead of the usual \$8.50.

The park will be open from 10 a.m. till 10 p.m. All rides will be operating except the greased lightning, the new 360° loop roller coaster, which won't be finished till late spring.

## SPRING CLASSES

### CHINA PAINTING

Ten 2½-hr sessions, \$31.25/person (plus materials, approx. \$50.00). Tuesdays, 7-9:30 p.m., Mar. 14 through May 16 (except Mar. 21). Sign-up deadline: Feb. 28, 1978.

As this class is a considerable investment to the student, it is fair that each one knows exactly what he's getting into. The instructor Barbara Bahrt will host a demonstration on Tues., Feb. 28 at 6:30 p.m. in Room 215 at the Recreation Facility. After seeing the work and the type of finished product that you are left with, the expense becomes reasonable.

### OIL PAINTING

A reminder to get over to Bldg. 11 and see the display of students' paintings showing there for the month of February.



AGREEMENT REVISED - Jan. 13, a revised agreement between the Center and Local 2284, AFGE, was signed by Center Director Christopher Kraft; Ledriou L. Linson, president of the Local; Bailey Chaney, Chief Negotiator for the Center; and members of the negotiating committees for the Center and the Local. This revised agreement will become effective upon approval by NASA Headquarters, and covers Civil Service employees in units which are represented by Local 2284 at JSC.

## Carver is named the Co-op of the Month

Robert M. Carver has been working in the Exploratory Investigations Branch under the direction of Richard Juday during his first work period as a co-op student at JSC.

Carver, a University of Texas sophomore majoring in electrical engineering, has been working

closely on a problem concerning the Earth Observations Division's analytical work: the creation of image transparencies from numerical, remotely sensed data.

The machinery involved has not previously been subjected to the kinds of analysis Carver has been doing on it, so he has been plowing unbroken ground. This has involved work with personnel from different organizations as well as individual work. The analyses Carver has been doing have involved some concepts presented at a scholastic level above his own, and other concepts are yet in the formative stages, not to be found in any scholastic curriculum.

Juday says Carver has shown a remarkable assimilation of concepts new to him.

"He quickly but cautiously picks up an idea and rapidly turns it into a working tool," Juday states.

Particular examples are the ideas of quantitative colorimetry and the color photographic process, for which Carver, as a hobbyist, has no more than a qualitative background. He is said to have demonstrated an engineering sense and aptitude well beyond what would be expected on the basis of his education, and he has apparently absorbed the important aspects of multichannel remote sensing, putting them to use in his project.

"With a minimum of supervision," says his supervisor, "he has pursued relevant information and performed the measurements basic to his task. Carver has been responsive to externally imposed schedules, without sacrifice of work quality. In addition, his dealings with the many individuals within and outside the Earth Observations Division have been marked by social and technical maturity."

The results of Carver's work are being incorporated into a pilot project that could substantially advance JSC's state-of-the-art in multichannel imagery generation. His work is considered authoritative and directly in line in the technology. As such, Carver's work is a direct and demonstrable contribution to Earth Observation Division objectives.

## Roundup Swap Shop

Swap Shop advertising is open to JSC federal and on-site contractor employees. Goods or services must be offered as advertised, without regard to race, religion, sex or national origin. Non-commercial personal ads should be 20 words or less, and include home telephone number. Typed or scribbled ad copy must be received by AP3/Roundup by Thursday of the week prior to publication.

### CARS & TRUCKS

76 Malibu Classic. 4-dr, auto, A/C, pwr steer & brakes, AM-FM stereo, immaculate, 29K. \$4,375 firm. Maas, X-5026 or 488-2965 after 5.

71 Ford pickup w/ camper shell, V-8, A/C, good cond in & out. Rees, X-3701 or 534-4929 after 6.

74 Plym Voyager 8-passenger van. V-8, 360 CID, pwr steer & brakes, auto, A/C, new floor carpet, 41K mi. 481-1775.

68 Ford pickup F100. 360, V-8, standard, A/C, radials. Blackwell, 474-4209.

62 Signet Valiant. Leather int, bucket seats, A/C, radio, one owner. \$500. Peterson, X-2161 or 986-5009.

76 280Z Datsun. Loaded. \$6200. Bruce, 868-6301.

77 Grand Prix. Loaded, low mileage, must sacrifice f/ best offer. 481-0066 after 5:30.

77 Ford Courier. 2 mo old, xInt cond, many xtras. Alexander, X-4211 or 333-3972 after 5 & wknds.

71 Cougar. 351 Cleveland engine, pwr steer & brakes, A/C, heater, tape deck. Good cond. \$1,300. Clowdis, 471-2447.

### PROPERTY & RENTALS

Lease: Townhouse, CLC, 2-bdr, 1¾ baths, private patio, xtra storage, no pets, near shopping centers. \$390/mo, first, last, & deposit. Avail March. Gibson, X-6224 or 488-6024 after 6.

Lease: 4-bdr, Forest Bend. \$350/mo plus deposit. 482-1547 after 4.

Lease: New efficiency condo, Bay Area Blvd; fireplace, refrig w/ icemaker, private patio. Avail Mar. 1. Lockard, X-4501 or 488-8007.

Lease: CLC, 3-2-2, attractive brick, landscaped, fenced back yard. \$350/mo & deposit. 488-7058.

Lease: Sagemont, 4-2-2, fenced, drapes, formals, den, utility rm, 2 children max, no pets. \$400/mo & deposit. 481-1918.

Sale: 12, 25, or 75 acres. \$600/acre. Four-hr drive. Property uses: current income, investment, home site, limited rec. Burton, 481-0780 after 5.

Lease: new cheery color coordinated Middlebrook home. No houses in back, breakfast area, separate dining, pantry, fireplace, large master bdrm suite, covered patio, finished garage, enclosed utility area, drapes, 3-2-2 \$450/mo. 488-7232 after 5:30 or weekends.

Rent: Lake Livingston, Cape Royale, compl furn home, 3-2-1. Fishing, hunting, tennis, golf, etc. Reserve early. Wk/mo/yr rates. 488-4487.

Rent: Galveston West End. 2 BR by-the-sea condo apt. full furn. \$180/wk off-season; \$260/wk in-season. Clements, 474-2622.

Rent: New Galveston Island Jamaica Beach cottage. \$175/wk or \$30/day for weekends. 334-1640 after 6 p.m.

### CYCLES

74 Suzuki TC-100 Street-Trail bike. Very good cond. \$250 334-2100 after 5. Girl's 26" bike. 3-sp, xInt cond. \$25. McBride, X-5121 or 534-2066 after 5.

72 Suzuki 90 Trail-Street bike. Mint cond, never dropped. \$350. Granger, 482-6638.

Motorcycle trailer. One-bike capacity. Ideal f/ compact cars. \$95. 482-5607 after 5 & wknds.

Girl's 20" bike, \$20; boy's 20" bike, \$20. 333-2340 after 5.

71 Honda CT 70 w/ rack. XInt cond, adult rider. \$195. Ferguson, 488-2329.

### HOUSEHOLD ARTICLES

GE double oven, wall mount, copper-tone, 12 yrs old, everything works, rotisserie, timer, temp probe. \$100. Hergert, 333-3716.

Karastan carpet, 9' x 12'; Acrilan, sage color. \$50. Also pecan kingsize headboard. \$40. Chambers, 482-7920.

Drapes f/ 4 windows: 2 pair - 60 x 84; 1 pair - 104 x 70; 1 pair - 31 x 34. \$50/all. Merriam, 488-3806.

White oak twin bdrm suite, 2 beds inc mattresses, box springs, triple dresser, 1 night stand f/ \$250. White & gold dinette, oval table w/ 4 chairs f/ \$75. Duncan Phye rose-satin stripe sofa f/ \$200. All xInt cond. 333-2340 after 5.

Solid mahogany table, 3 leaves, 7 chairs, china cabinet, buffet, xInt cond. \$1500. Also living rm chair, \$20; 3 ea American dining chairs. \$25/ea. Child's antique desk, \$95; antique dining table, \$75. 479-8752.

Early American breakfast table w/ 4 captains chairs. \$100. 481-1918.

Heathkit 25" color TV. Works, little time on, new picture tube, \$75. 482-7643.

Antique light oak washstand & early American couch. XInt buys. 488-4487.

### MUSICAL INSTRUMENTS

Baldwin organ w/ bench & music, walnut, beautiful cond. \$450. Cooper, X-6161 or 333-5883.

### PETS

Quality AKC miniature puppies 6 wks old. Shots & wormed. \$125. Also champion stand & miniature stud service. Carlin, 645-3722.

### STEREOS & CAMERAS

Stereo speaker set. Large (381 x 28h x 21d) bass reflex speaker enclosures containing Pioneer PAX-30E 12", 2-way speakers & crossover networks. Fine mahogany, furniture quality exterior. \$110 ea. Samouce, 482-0702.

Sony stereo STR-3800. AM-FM stereo receiver. \$100. Lake, X-5835 or 523-2137.

Magnavox 1500 stereo receiver & speaker system inc jacks f/ tape & headphones. \$220. Merriam, 488-3806.

### WANTED

9" or 10" radial arm or table saw (pref. table) in good cond. Burton, X-2568 or 481-0780.

2 sets of bunk beds, pine or oak, good cond. Bond, X-4909 or 944-6059.

1-bdrm apt. f/ lease or small house to housesit f/ short or long period. Conley, X-4271.

Firefighters needed! Men and women adult residents of CLC needed to join CLC Volunteer Fire Dept. Rewarding community service. You will be trained and equipped. Call 488-0023 any time.

Need new members f/ Bacliff Bass Club. Singles-couples welcome. Meetings, tournaments, prizes. Parker, X-4241 or Moble, X-4428.

Need riders for carpool from W Loop, SW Fwy. Bellaire area, 8-4:30. McLaughlin, X-5536 or 661-2974.

### MISCELLANEOUS

Sale: Under-dash FM & cassette player, \$30 Under-dash cassette player, \$15. Also, golf club, graphite driver, \$35. 482-7643.

Sale: Tires, 4 Dunlop ER78-14 radials, steel belted. \$10/ea or all f/ \$30. 482-5607 after 5 & wknds.

Lawn 3-seat glider, \$35; entire lady's size 14 wardrobe & size 8½ shoes, \$75. 333-2340 after 5.

69 Hardtop Puma Popup Camper. Two spares, sleeps 6, good cond. \$400. Peterson, X-3933 or 986-5009.

Ford van bucket seat. New, beige. \$50. 482-1310.

73 Chrysler 55HP outboard motor w/ controls, spare prop & manual. \$550. Andrews, X-6471 or 488-0597.

New chain fits McCullough model 35 chain saw w/ 14" bar. \$75. McBride, X-5121 or 534-2066 after 5.

Typewriter, \$25; 2 pair snow skis, size 8 (women) & size 9 (men). \$90/both. Cooper, X-6161 or 333-5883.

# His 'dream' included a pick and shovel — and Antarctica

The Antarctic is a vast storehouse for scientific research — relatively untapped, largely unexplored, and unspoiled.

John O. Annexstad, assistant curator of lunar samples since 1970, has been to this great white wilderness four times and can't wait for another chance to go back. It would seem to us ordinary folks that once is enough (if that), but not Annexstad. His first visit was in 1957 as a scientist and member of the International Geophysical Year Team.

Annexstad looks back on that period of his life and laughs at the irony of the situation. "Here I had just graduated from college in Minnesota. All my life I remember being drawn to the out-of-doors, backpacking in the snowy climate where I lived. I gorged myself on tales of Byrd's expeditions to the polar regions. Then, never expecting to go there myself, I applied for a job with the U.S. Coast and Geodetic Survey. Some time later, they wrote back asking if I'd like to go on an Antarctic expedition. Trouble was, I had already accepted a well-paying job in West Texas in oil exploration. I stayed at it awhile, but my brain kept telling me that a chance to realize your lifetime dream just doesn't come along every day. I knew I'd always kick myself if I didn't go. So I wrote back asking if the opportunity was still open and they said 'Sure!'"

"Anyway, I quit my job and went on the expedition — with a considerable cut in pay. I might add ..."

The Antarctic is divided into several scientific areas, or bases, belonging more or less to a particular country, but essentially neutral as a scientific community. The bases are quite far apart and the

only contact between them is with a radio setup.

The United States once maintained six bases, two interior and four coastal stations: among them the Byrd Base, about 80° S and the Pole; McMurdo Base, a supply base, and Little America 5, named after Byrd's early Little America expeditions of the thirties.

Annexstad's first taste of his "dream" was spent at the Byrd Base, isolated from all but 19 other scientists for 13 months.

"The Sun was below the horizon for 126 consecutive days. In July of 1958 we had a magnetic storm so severe that the sky was blood red for 12 hours. The weather is seldom above 0° F and the average temperature was about -20° F with a constant 20-mile-per-hour wind. Naturally, we dressed for it with specially insulated clothing, but often that was not enough. And you dress differently for -20° F than you do for -70° F, the temperature at which I found myself shoveling snow for an hour and a half one day. They said if you lose your mitten, you lose your life, so we had our mittens tied to us as well as just placed on our hands.

"Of course we had heated shelters under the snow surface. But the passageways were not specially heated, so if you had to use the restroom, you'd better have some warm clothes ready. The insulation wasn't the best and peculiar things would happen. Like if you put your drink on the floor it would freeze, but if you got it near the ceiling, it was too hot to drink."

The coldest Annexstad can remember was -82° F, and he says the temperature stayed at -70° F for 15 days. But the men had their work and one of the most important things that was proven on that expedition was that man



AT -70° F — Annexstad after shoveling snow was such a sight that one of his colleagues grabbed a camera for this shot.



could not only live but do useful work under very adverse conditions.

Among the various studies in the Antarctic are marine biology and oceanography, studies which showed the region to be very rich in marine animals along the coastal regions. Prehistoric animals were found that had been thought extinct. Glaciology investigates the movement of ice and, indirectly, the effect of the Antarctic on global weather. Much knowledge can also be gained there concerning changes in the geomagnetic field, cosmic rays, and the aurora.

Annexstad's particular scientific (and educational) fascination has been upper atmospheric geophysics, and he conducted many experiments along these lines in the Antarctic. In fact, he assumed when he joined JSC in 1968 that he would be working in this field, but it didn't last, and he became

involved in the curation of lunar samples.

One would expect that Annexstad's honeymoon with the great white continent would have been over after 13 months at the Byrd Base. Not so. In 1960-61 he was back again, this time to the Antarctic peninsula with a Chilean expedition. Then, as a research member of the University of Alaska, he was off to the MacQuarie Islands with the Australians in 1967 on two additional expeditions.

Annexstad sees himself as a scientist, not a meteorological expert or a curator. He has been a fellow of the New York-based Explorers Club since the sixties and a member of the Australian Antarctic Club. He has two Polar Congressional medals and a mountain named after him.

What's the fascination? Is it just because "it's there"?

"The Antarctic is a place," says Annexstad, "where you can actively contribute and be involved in the primary sense, not in the indirect secondary sense. Exploration is an extension of man's natural curiosity, his destiny, his need to know, to find, and to solve."

Annexstad's fascination with the Antarctic, then, appears quite direct and simple. But hidden in his response is, perhaps, that elusive definition of fulfillment and meaning that so many articles on the subject claim Americans have lost: The individualist has a dream. wants just a chance, is willing to take a risk. This person may be handed one of several options, or obstacles, to realizing his dream: a bundle of red tape; a promise of prestige, power, or security; or simply what amounts to a pick and a shovel.

Annexstad chose the pick and the shovel.

## Huntoon speaks at Future Colloquium

Dr. Carolyn S. Huntoon, Chief, Biomedical Laboratories and Deputy for Personnel Development, Astronaut Office, will address the 1978 NASA Administrators Profiles of the Future Colloquium Series, Feb. 23, 1978, in Washington, D.C. Her topic is the "Future of Women in Space — A New Era."

The Colloquium Series consists of talks by distinguished lecturers drawn from a wide variety of fields, the main objective of which was to broaden the intellectual horizons of NASA people through exposure to future concepts, issues, and alternatives.

The selection of the six women as members of the new group of astronauts is viewed with enthusiasm at JSC. The prospect of women astronauts has caused planning and execution of a medical program designed to acquire the data necessary to evaluate the health of women as potential flight crewmembers.

Thus, the groundwork to put the first United States woman in space has been laid and the new Shuttle era of women in space is at hand.

Huntoon will discuss the work which is currently in progress toward this end and the anticipated roles for women in space in the future.

Huntoon holds a Bachelor of Science degree in Biology from Northwestern State, a Master of Science degree in Physiology, and a Doctor of Philosophy degree in Physiology from the Baylor University College of Medicine. She joined NASA in 1968 as Head, Endocrinology Laboratories. In 1976, she was appointed Special Assistant to the Director, JSC, and also served as Chief, Space Metabolism and Biochemistry Branch.

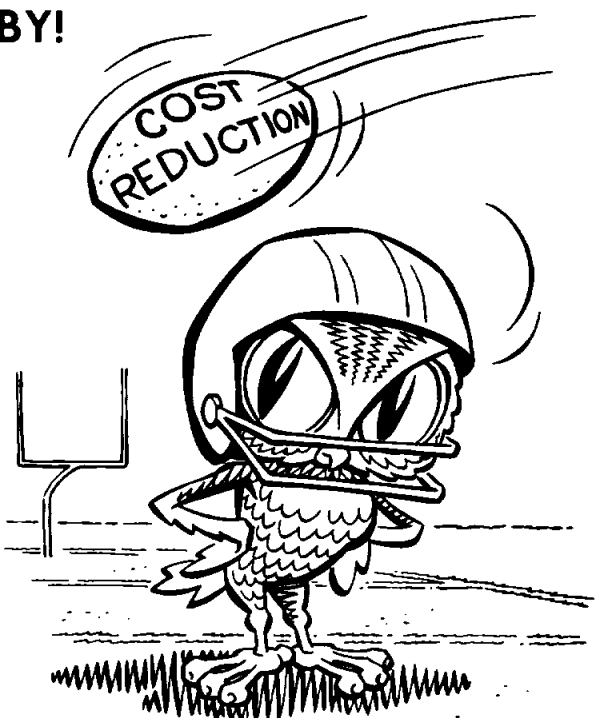
A few of the many awards Huntoon has earned are: the NASA Medal for Exceptional Scientific Achievement, the Arthur S. Flem-

ing Award, the National Civil Service Career Achievement award, and Delta Zeta National Sorority's 1977 Woman of the year.



Dr. Carolyn Huntoon

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