

ROUNDUP

Lyndon B. Johnson
Space Center

NASA

June 9, 1978 Houston, Texas

Vol. 17 No. 11

1 of 5 in US die of cancer

An insidious killer is loose in the land, a killer that is responsible for one-fifth of all deaths in the United States — cancer.

Some forms of cancer are so insidious that they remain undetected even in the most thorough of physical examinations, while other types can be detected early — provided the individual gets regular checkups.

Most male cancer occurs in the lungs, prostate and colon/rectum. In females, it is in breasts, uterus and colon/rectum.

The annual physical exam offered by the JSC clinic to federal employees includes comprehensive tests to detect early cancer in these areas by means of chest x-rays, stool examinations for occult blood, proctosigmoid exams and pap smears and breast lump exams for women. The clinic recently has dropped the week-long meatless diet requirement for the stool occult blood exam. The clinic also has an educational program for breast self-examination.

In addition to cancer detection checks, and the cardiovascular measurements described in the last issue of the *Roundup*, JSC clinic tests also screen for early glaucoma, early or adult onset diabetes, pre-symptomatic gouty arthritis, and many other conditions affecting employee health.

If you neglected to confirm your annual physical exam appointment, or missed it because of travel or a meeting, call the clinic at ext. 4111 and reschedule. A checkup could be a life saver!

MSFC Signs Seventeen PI's For Space Processing

Improved medicines, electrolyte materials for higher-capacity, smaller-size batteries, and larger, more perfect crystals for electronic applications are among a long list of products expected to evolve from materials processing in space research.

Seventeen scientists have recently signed contracts with NASA's Marshall Space Flight Center, Huntsville, Ala., to develop these and other materials experiments that will be among the first to be

conducted in the weightless environment offered by the Space Shuttle and Spacelab.

The \$12 million program, covering a five-year initial period, is expected to demonstrate the value of space for materials work by showing significant scientific results to develop specific useful materials and products. The continuing program is intended to develop space

(Continued on page 4)



ALT AWARD

The crews of the Approach and Landing Test Program are pleased to present you with this medallion in appreciation of your contribution to the successful ALT flights of the space shuttle orbiter, Enterprise.



ALT CERTIFICATE—The above certificate and medallion is being distributed to more than 10,000 government and contractor employees throughout NASA who supported the ALT program beginning in February 1977 through October 26, 1977.

Shuttle vibration tests begin: main engine test scheduled

Ground vibration tests of the Space Shuttle Orbiter Enterprise began the evening of May 30 at the NASA Marshall Space Flight Center, Huntsville, Ala.

This series of tests is scheduled to run for the next six weeks, and is the first major structural test of the Orbiter.

The Orbiter is attached to the external fuel tank, which in flight will furnish the fuel for the Orbiter's three main engines. This portion of the test is to simulate the high altitude portion of flight.

Later this summer, the two solid rocket boosters, which along with the three main engines will launch the Orbiter, will be attached to the Orbiter tank configuration for additional tests.

The third test of the main engines of the Orbiter has been scheduled for June 15 at the NASA National Space Technology Laboratories at Bay St. Louis, Mississippi. This test is scheduled to be a 35-second burn at 90 percent thrust.

Two rare Antarctic meteorites being processed here by scientists

Two meteorite samples retrieved under clean conditions near Allan Hills in the TransAntarctic Mountains and believed to be rare carbon-bearing types were given an initial examination at the Johnson Space Center yesterday. The two special meteorites were collected along with over 300 other, less rare types, on an expedition sponsored by the National Science Foundation and led by Dr. William Cassidy, a University of Pittsburgh geologist, this past December and January.

If, as expected, the two carbon-bearing types are verified as carbonaceous chondrites, there is the possibility the two fragments may contain clues of the very earliest epoch of our solar system and may shed some light on the evolution of organic compounds. This knowledge will help in understanding the evolution of life here on Earth.

Because of the environmental conditions in the Antarctic, such as extremely low humidity and preserving cold air, the meteorites which Cassidy's team found are thought to represent the cleanest and least contaminated meteorites yet collected.

Cassidy's group found over 300 such meteorite fragments in a six-mile area during the two month search to test the

hypothesis. The 300 or so fragments represent perhaps 30 different meteorite falls.

Because of early expectations of the find, the NSF and the National Aeronautics and Space Administration, provided Cassidy's team with special lunar-type handling equipment and lunar-rock storage boxes so any meteorite fragments which were found could be kept uncontaminated until a facility and procedures were established for their examination under clean-room conditions.

The special meteorite facility has been installed in the Lunar and Planetary Sciences laboratory at the Johnson Space Center and procedures for the initial examination and subsequent distribution of the samples have now been approved by a committee comprised of representatives of Cassidy's team, the National Science Foundation, NASA, the Smithsonian Institution, and various universities.

Processing, that began on June 8, consists of initial characterization of the samples. This will involve the precise weighing and photographic documentation of the samples along with a written description of each sample.

Processing, that began on June 8, consists of initial characterization of the samples. This will involve the precise weighing and photographic documentation of the samples along with a written description of each sample.

Processing, that began on June 8, consists of initial characterization of the samples. This will involve the precise weighing and photographic documentation of the samples along with a written description of each sample.

Processing, that began on June 8, consists of initial characterization of the samples. This will involve the precise weighing and photographic documentation of the samples along with a written description of each sample.



ORBITER NEUTRAL BUOYANCY TRAINER—Dr. Christopher C. Kraft, Jr., JSC director, is shown examining an engineering model of the Orbiter Neutral Buoyancy Trainer (ONBT) that will be used to train Orbiter crews in the Neutral Buoyancy Facility to be constructed here at JSC in Building 29. Shown with Kraft is Frank Urteaga, president of CASPAN Corporation, the company that designed and made engineering drawings for construction of the full scale model.

(Continued on page 4)

Luna's attention to myriad details earns \$100 secretary of May award

Florestela Luna serves as secretary to the branch chief Public Services Branch, Office of Public Affairs.

Luna has been with the Public Affairs Office 7 years and since 1975 has been with AP4. During this period she has shown exceptional qualities of reliability, initiative and a very mature ability in arriving at sound decisions.

The Public Services Branch, PAO, has, as a matter of routine, highly complicated and extremely detailed procedures for receiving top level protocol visitors and accuracy in all administrative details pertaining to these visits reflects the professionalism of not only JSC, but NASA.

The first contact is usually with the secretary, and Luna has been consistently pleasant and to the point. She refers all information concerning the visit accurately and expeditiously. Moreover, she follows up to assure that action items have been accomplished.

Luna is punctual. Many days she arrives early and stays late to work on special projects which have short lead times. Examples are the visits by the President of the U.S.A.; the Egyptian Ambassador; the Ambassador from the Peoples Republic of China; Cabinet members; Congressional Investigative Committees; heads of foreign nations; Congressional members.

These protocol levels demand the utmost correctness and extremely important is correct communications from the visitors to the supervisors, to the protocol specialists who will receive the assignments.

Luna has, without exception, made the visitors feel confident that their visit itineraries are designed to reflect their interests. She types the formal agendas for these visits; sends confirming correspondence; makes notes of any changes from agendas; assures that all the information is routed to the appropriate participants to include the Director, her supervisors, the Public Affairs Officer, the briefers and the JSC professional host who represents the Director during the visit of these dignitaries.

In addition to the foregoing, Luna manages all of the AP4 travel coordination and selects the most economical way to the travelers destination consistent with schedule of meetings at the destination. She does the travel claims and makes sure accurate records are maintained.

During the ALT tests and the Space Shuttle/747 arrival at Ellington AFB, Luna's attention to detail assured an accurate invitation list. As a result, JSC has received many compliments from the Houston Harris County community leaders on the thoroughness with which they were received at the ceremonial sites.

She makes the job of every professional easier and each one has implicit confidence in the manner in which she deals with other JSC organization elements and with all off-site activities.

The one word which best describes Luna's on-the-job performance is "professional". She wholeheartedly provides secretarial support to our Educational Programs, Exhibits and Artifacts Programs, Visitors Programs, Protocol and Community Affairs Programs Managers.



NASA RUNNING WINNERS—JSC point winners from the NASA-wide running competition in April that finished in the top ten in each of their respective age groups are l. to r.: Jimmy Gilbert, 3rd-2 mile, 4th-4 mile; Lerah Bordanano, 3rd-4 mile; Reuben Zavala, 8th-2 mile; Herb Cottle, 1st-2 mile, 1st-4 mile; Rex Martin, 7th-2 mile, 7th-4 mile; Billie Gibson, 7th-4 mile. Winners not available for the picture were: Dennis Grounds, 10th-2 mile, 10th-4 mile; Steve Hudson, 2nd-2 mile, 1st-4 mile; Bill Lenoir, 8th-2 mile; Ed Gibson, 7th-2 mile; Don Cherry, 10th-2 mile, 10th-4 mile; Pat Butler, 7th-4 mile; Fred Price, 6th-2 mile, 5th-4 mile. Congratulations! The next inter-center competition will be in October.



"A" LEAGUE SOFTBALL CHAMPIONS—Plagued by injuries to key starters, the Mets won the 1978 "A" League title on May 30. In winning their seventh crown in the last eight tries, they romped to a 9-1 record for the season. Shown front row l. to r. Rich Holtje, team manager; Jack Boykin; Bill Jamerson and John Kaderka. Back row l. to r. Jim Smith; Nat Hardee; Mike Slack; Wayne Whittington; Richard Kruse; and Al Morrey. Team members not pictured are Chriss Mitros; Ken Kram; Tom Porantie; and Jim Costello. The champs are sponsored by Miller Freeman Ford of Clear Lake City.



FLORESTELA LUNA

Going on vacation? check SATO if you fly

The Scheduled Airlines Traffic Office (SATO) located in Building 1 here at JSC makes travel reservations and tickets for employees on official travel, but did you know that the same service is available to all center employees and their families for personal travel?

George Weller of SATO says that tremendous savings on air fares are now available if you are planning a vacation trip this summer, fall or winter.

Weller said there are now many bargain fares offered by airlines that have no restrictions such as length of stay, or that reservations and ticket purchases be made in advance.

Discounts of up to 50 per cent are offered by many airlines on weekdays with no advance reservations and ticketing required. However, seats are limited on most of these fares, so Weller recommends that you book reservations as soon as you know your travel date.

Call the SATO at extension 3305 or come by Room 126 in Building 1 for additional information.

A-V Corp selected for PAO support

The National Aeronautics and Space Administration has selected A-V Service Corporation to enter into formal negotiations for award of a contract for Audiovisual Public Information Support Services.

The work to be performed will fall into two main areas: (1) General audiovisual support; and (2) motion-picture production.

The contractor shall perform audiovisual support services that include the following: (1) Operate and maintain a public information still photographic library; (2) maintain a motion-picture distribution library; (3) provide news and information media services; (4) provide design and documentation support to the JSC Public Affairs Office; (5) provide projection services; (6) maintain an audiovisual equipment loan pool; and (7) produce motion pictures.

A-V Service Corporation's proposed contract amount is approximately \$600,000 for the initial one year period beginning July 1, 1978. It is contemplated that additional periods of time, not to exceed 24 months in 12-month increments, will be negotiated.

The other proposers were McGregor & Werner, Incorporated, Washington, D.C. and National Film Company, Inc., Houston, Texas.

JSC bicyclists invited to ride

JSC bicyclists are invited to enter the Sierra Club's 20-mile night time bicycle ride Summer Night Fun Circus. The event will be held Saturday, June 17 behind the Galleria on S. Post Oak. Registration begins 11:30 p.m., ride starts at 2 a.m. For more information contact Sam House X5491.

Toastmasters install officers

The Spaceland Toastmasters Club recently installed new officers. They are Doris Folkes, president; Anggie Johnson, ed. vp; Benny Baker admin vp; Ann Sullivan secretary; Gus Babb treasurer; and Darrell Boyd sgt-at-arms. The appointment of Marilyn Bocking to

serve as the assistant area governor for administration was also announced.

Visitors are invited to the regular meetings to learn more about Toastmasters. For information on meeting times contact Gene Cook 483-5983 or Benny Baker 334-3424.

What's cookin' in the JSC cafeteria

WEEK OF June 12 - June 16

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/Applesauce; 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.

WEEK OF June 19 - 23

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

LONE STAR DRAMA

NASA nights at the Lone Star Drama in the Galveston Island State Park amphitheater will be July 7,8,9. The drama has been completely revamped this year and is faster moving than last year's edition. Flyers will be distributed to all employees about July 1. Take a copy of the flyer with you to the amphitheater ticket office for a \$1 discount on reserved seats or a 50-cents discount on general admission.

DEAN GOSS DINNER THEATER

Tickets for the Dean Goss Dinner Theater are now available in the Building 11 Exchange Store. Prices are the same—\$16 per couple or \$8 single. The tickets are good any night except Saturday and are intended for JSC employees, contractors and their guests in small groups (6 to 8 persons). If you have a larger group, please contact the theater directly for tickets and arrangements.

CIRCUS TICKETS

The EAA has 300 tickets to the Ringling Brothers Circus in the Summit for the 6 p.m. performance on July 16. The tickets are \$3.50 (regular \$7.00) and will be on sale at the Building 11 exchange store starting June 19.

BLDG 11 TICKET COUNTER

Astroworld - \$7 (reg. \$8.50) available all season.

Six Flags Over Texas - \$6.75 (reg. \$8.50) available all season.

Disney Magic Kingdom Cards - Free; good for discounts on rides at Disneyland and Disneyworld, and lodging at selected hotels and motels.

Funseekers cards - Free, good for discounts on entrance to Astroworld and all Six Flags and lodging at selected hotels and motels.

EAA Nostalgia Dance - June 24 Gilruth Center, tickets \$5 each available starting June 12.

PICNIC PICTURES

JSC EAA picnic pictures in the last issue of the Roundup were taken by Mike Hernandez—official picnic photographer this year.

CLASSES

Oil Painting - 6 week class starting June 15, price \$34.50/person. Sign-up deadline is June 12. Maximum of 15 students. Contact Tim Kinkaid x3594 or Ted MacDonald x4921 at the Gilruth Center. Instructor is Lois Miller x3216. Classes meet 6-8 p.m. Thursdays, in Room 209 at the Rec. Center.

ALLEY THEATRE SUBSCRIPTIONS

The Alley Theatre Corporate Subscription program is again being offered to NASA and contractor employees. Season tickets are available for next year's five performances at a low price of \$24.50, which may be charged on a variety of credit cards.

See your EAA representative for an Alley Theatre brochure which will explain the program. The brochure contains an order form for subscriptions.

If you are planning to subscribe, fill out the form, enclose a check payable to Alley Theatre or indicate a charge plan on the form and send to Doris Wood, EM (X-2831).

Corporate Subscription coupon books will be home-mailed just prior to the opening of the 78-79 season in October.

**Take
stock
in America.**

Join the Payroll Savings Plan.



COMING EVENTS

Soul Dance Sept. 16 and NASA Night at Dean Goss Dinner Theater.

AERO CLUB OPENINGS

The JSC Aero Club has openings in membership for civil service and contractor employees and their dependents.

The club offers a ground school, a complete solo course, FAA certified flight instructor, and aircraft rental to members. Contact John Rector at X4027 for details.

TENNIS WINNERS

May 5-7, the spring singles tennis tournament was held by the JSC Tennis Club. Three men and women skill divisions (advanced, intermediate, and novice) plus a men-over-35 category were represented.

All first round matches were played at local area tennis facilities. Subsequent matches were held at San Jacinto College.

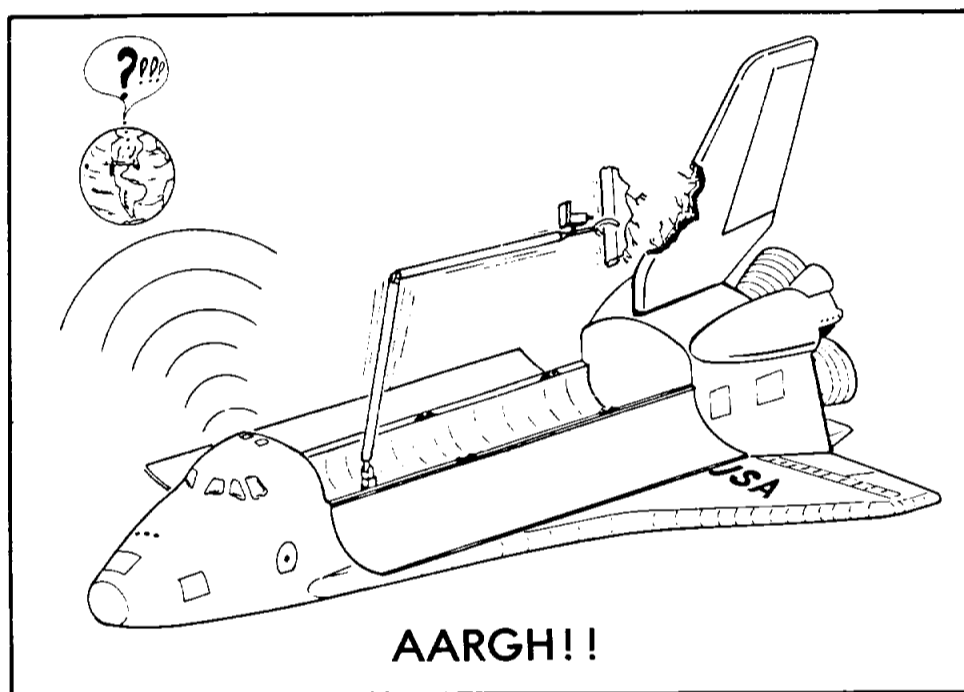
The women's novice group played a round-robin consisting of four eight-game pro-set matches with Marilyn Stovall edging out Mary Wylie for first place. The other events were regular elimination tournament play.

Men A:	Herb Cottle first, Guy Down second.
Men B:	Phil Beran first, Steve Dansby second.
Men 35:	Gordon Fullerton first, Jim Downs second, Ken Adler third.
Men C:	Drew Renick first, Pat Murtaugh second, Scott Zrubek third.
Women A:	Kathy Sullivan first, Marie Fullerton second.
Women B:	Suzie Richards first, Leslie Garner second.
Women C:	Marilyn Stovall first, Mary Wylie second.

The next JSC tennis tournament will be an age group singles to be held at the Bay Area Racquet Club June 9-11. For information on the tennis club or upcoming events contact Carolyn Thompson at 483-5987, Jim Walker 483-3551, or Gresh Downs 333-6431.

WE GOOFED

Liz Pieberhofer was the runner up EAA picnic top ticket seller....not Pieverhoff as reported in the May 26 Roundup.



Roundup Swap Shop

PROPERTY & RENTALS

Livingston lake lot, beautiful homesite, tall pines and cleared. \$2500 equity, \$2000 remaining. Long X3458 or 481-2174.

Rent: Lake Livingston Cape Royale, comp furn 3-2-1, fish, hunt, tennis, golf, reserve early, wk/mo/yr rates. 488-4487.

Galveston West End, 2-BR By the Sea condo apt, ful furn. \$180/wk off season, \$260/wk in season. Clements, 474-2622.

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

Rent lakeside vacation retreat at Cape Royale on Lake Livingston. New 3-bdrm waterfront home compl. furn. Facil. inc tennis, pool, golf, boat launch. Rent by wk or mo, 488-3746.

For Sale: Beach house on shore at Emerald Beach, Bolivar Penn. Furnished to easily sleep 12; insulated and heated. Tindall 488-7058.

Lease Middlebrook 3-2-2, fenced, drapes, gas grill, patio, wet bar, avail, \$450 mo. 488-0658.

Lease: Middlebrook II, 4-2-2 Drapes, landscaped, fireplace, wet bar, patio. Avail June 5. \$475/mo. 488-4487.

HOUSEHOLD ARTICLES

Kenmore washer, \$35; vinyl sofa, \$25. Anderson, 487-4249.

Single bed, maple w/mattress and trundle bed w/mattress. \$50, Thompson, 332-2229.

6 ft. Hamilton drafting table, split top, two drawers, cushioned drafting chair on casters. \$100, Vern X4468 or 482-2231.

Large upright Frigidaire 187 freezer, frost free, about 2-years old, kept indoors, like new \$200, Vern 4468 or 482-2231.

Kimball console piano Mediterranean style pecan furniture, like new, paid \$1800, make offer. Vern X4468 or 482-2231.

CARS & TRUCKS

'76 Pacer, 26K miles, auto, air, excellent condition, \$2800. Long X3458 or 481-2174.

'69 Triumph TR6, rebuilt engine, carb, clutch, brakes plus many other parts, 66K miles, 23 mpg in town, must sell \$2000. Westerfeld X5169 or 482-1717.

'71 VW 411, auto, new tires/brakes, clean, runs good, \$950 or best offer. 944-3795.

'74 Pinto GT-302 V8, radio, auto, white w/ orange trim. Orig. owner, excellent cond., low mileage, 334-2391.

'75 Ford super cab, PS/PB, A/C, new camper shell, Patterson, 331-5550.

'72 Ford Mustang 302 3-speed, 84K miles, engine in perfect condition, \$2000, Rudy Garcia after 5 p.m. 482-1023.

'71 Chevy Impala 4-dr. sedan, 350 V8, 78K miles, exceptionally good cond., 334-3019.

'72 Ford sta wgn, auto, air, PS/PB, other. Good condition. \$950 or best offer. Handley X2271 or 482-7041.

'65 Olds Starfire, one owner, 84K miles, excel. cond. \$650, Moore X2982 or 488-4089.

'74 Dodge custom van, 318 std., FM stereo, CB, icebox, shag interior, rack, ladder, mags, no air, \$3250. 488-5037.

'71 Valiant scamp, auto, air PS, 225 eng., vinyl top, 14-20 mpg, original owner, Tex Ward 488-5445.

'65 Corvette conv., 4-speed, new 327, 2 tops, new tires, good glass, original, \$3600, Dowd 488-5956.

Four reverse chrome wheels, 5-lug, 6-1/2 X 14, fit full size Ford and Chrysler products. \$15 each. Williams X2583 or 488-2432 after 5 & wkends.

'77 Plymouth Volare sta wgn, 318, auto, air, cruise, radials, 3000 miles, warranty to 24,000 miles, Ellis X3048 or 466-5127.

350 V-8 engine, new short block, valves, etc.; auto trans completely rebuilt, all new parts. Both for '73 Chevelle. \$250 each or both for \$400. J. Craig X2703 or 422-0435.

BOATS & PLANES

1968 Cessna 177 Cardinal, 1/3 partnership \$5,500, 1500 TT, full IFR, Narco 78 centerline avionics, Jan. '78 annual, based at Hobby. Buzzard X3458 or 482-2067 after 6 p.m.

14-ft. fiberglass V-bottom boat and 5 hp outboard motor. \$795, 482-7546.

Aircraft audio switching panel model RST 501 w/audio amplifier and marker beacon receiver, complete with tech. info for installation, \$50, Jim Moser 585-8571.

Piper OL-1 Loc/Omni indicator, good, \$50, T.A. White 474-2214.

CYCLES

'75 Yamaha RD-350, 6000 miles, mint condition, \$700, Jim Akkermon, 488-1493.

'75 Honda XR75, excellent shape, \$275, T. White 474-2214.

STEREOS/CAMERAS

Nikon wide angle lens, 24 mm, F 2.8 Nikor-N automatic, \$100, Stanley, 488-5506.

Minolta, 50 mm f 1.7 MC Rokkor lens, \$35. Minette, X4315.

WANTED

Bacliff Bass Club needs singles/couples, meets, tourney, prizes. Parker/4241 or Mobley/4428.

Clear Lake Citizens to volunteer for CLC Volunteer Fire Dept, rewarding community service, will be trained & equipped. 488-0023 anytime.

Want to trade one or more items for metal enclosure 12X15X10 in. or larger for ham radio project. 1. Brass bilge pump, han oper., needs work 2. 60-amp circuit breaker box 3. Set shop manual for '73 Mercury Cougar. Young, X2759 or 334-2187.

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 about 20 words and include home phone number. Typed or printed ad copy must be received by AP3/Roundup by Wednesday of the week prior to publication.

House painting for summer, spray or brush, xpncd high-school boys, call for estimates Joe 488-0658 or Bill Jr 488-0597.

MISCELLANEOUS

Swim lessons—experienced certified WSI instructor; areapool; beginners, advanced beginners; 2-week sessions; for more info call Jean at 488-3335.

Bushnell custom binoculars, 9X36, excellent cond., orig. cost \$145, asking \$85, 471-0454.

Sears motorized car CB antenna with splitter for AM/FM radio, new in box \$30. T. A. White 474-2214.

Craig AM/FM/WB cassette player model 3516A cost \$150, sell \$90; amplifier and cable for 24 watt output, cost \$45, sell \$30. Both \$115(almost new) T.A. White 474-2214.

Two new Jensen car Hi-Fi speakers, 20-oz magnets, 5 1/4" round, cost \$34, sell \$22 T. White 474-2214.

AHM HP-gage Union Pacific big boy engine 4-8-8-4 with tender & cars, make offer, T. A. White 474-2214.

AM pushbutton car radio with speaker, out of '73 Buick \$15, T. A. White 474-2214.

Several slide vendor machines for car wash towels or bottle products. used \$10 each, T. A. White 474-2214.

Build your one shop vacuum, 1-hp, 2-stage vac motors, 115 V-AC, \$5 each, girls bike, 20 in. wheels \$20. T. A. White 474-2214.

Enclosed luggage carrier, 48X48X14, clamps to rain gutter, \$12. 488-5037.

GR 295 Heathkit console color TV. Plays but needs some work, \$100. Blackmon, 481-3541.

Custom-made macrame. Hanging tables, lamps, planters, owls, etc. reasonable. Kelly or Kim Walker 479-7815.

Pop-up tent trailer. 1970 wheelcamper, sleeps six. Stove, sink, water tank. Excellent cond. \$1300 482-5536.

space processing..

(Continued from page 1)

materials science and technology in both research and manufacturing activities leading to privately funded materials processing in space.

"In the process of selecting these first 17 experiments and working out the conditions of the contracts with the principal investigators," reported John Williams, Marshall Center's experiments manager for the program, "we have established a management procedure that gives us the flexibility we need for a smooth and effective development of materials processing in space.

"We must plan several years ahead," he continued, "not only to bring other scientists and their experiments into the program, but to refine and re-fly those experiments that show promise for a better product. Only in this way can we reach our goal of paving the way for private enterprise to commercialize space processing."

With routine flights into space scheduled to begin next year, scientists will have many opportunities to investigate

materials processes that are unsatisfactory or impossible on Earth due to gravity forces. The first experiments will build, to an extent, on results of investigations performed during Apollo, Skylab, Apollo-Soyuz and SPAR (Space Processing Applications Rocket) programs. They are expected to develop materials processing and experiment hardware technology for future space commercialization.

Five of the 17 scientists will have an opportunity for a preliminary flight of their experiments in a Materials Experiments Assembly (MEA) package on an early orbital flight test of the Space Shuttle. This flight will not only produce valuable scientific data, but will determine whether further refinement of the experiments and hardware is needed before the first flight on Spacelab or Space Shuttle. Four of the MEA experiments will be flown again, along with five others, on a Space Shuttle satellite deployment mission. The fifth one will be flown again on the third Spacelab mission, a mission devoted almost entirely to materials processing in space. Four more of the scientists will have experiments on this mission.

Two US scientists selected Spacelab payload specialists

Two Americans have been named by NASA as part of an international group of five scientists who will serve as payload specialists during first Spacelab mission scheduled for the latter part of 1980.

One American and one European eventually will be selected to fly aboard the Earth-orbiting space laboratory and operate the science instruments.

The American payload specialists were nominated and selected by the Investigators Working Group (IWG), which is composed of scientists representing all investigators.

U.S. scientists selected were:

- Dr. Michael L. Lampton, 37, of Berkeley, Calif., a space physicist at the University of California, Berkeley; and
- Byron K. Lichtenberg, 30, of Natick, Mass., a vestibular researcher at the Massachusetts Institute of Technology, Cambridge, Mass.

Payload specialists are new to the space program. Their responsibilities will be to perform experiments in space aboard NASA's Space Shuttle, which will carry the European-built Spacelab into Earth orbit. Payload specialists are not pilots.

The three payload specialists who are not chosen to fly in space will act as backup specialists, participating in ground-based mission activities at NASA's Johnson Space Center, Houston, Texas, during the flight. This choice will be made some months before the flight.

The American payload specialists named this week were selected from a list of six finalists, identified late last year after screening programs were conducted. The European scientists, announced last week, were selected by the European Space Agency (ESA) from among thousands of applicants in its member states after parallel screening programs were conducted in Europe.

The first Spacelab will be launched aboard the Shuttle from NASA's Kennedy Space Center in Florida. It will orbit the Earth at an altitude of 250 kilometers (155 miles). At the end of the seven-day mission, the Shuttle will return for a runway-type landing at the Kennedy Center, be serviced and readied for other missions.

On the Spacelab 1 mission, investigations will be conducted in stratospheric and upper atmospheric physics, materials processing, space plasma physics, life sciences, astronomy, solar physics, Earth observations and space technology.

NASA's Marshall Space Flight Center, Huntsville, Ala., is responsible for the payload specialists' training activities as part of its overall management responsibility for the Spacelab mission. ESA's Spacelab Payload and Coordination in Europe (SPICE) organization will manage training activities in Europe.

Rocketdyne to build nine more SSMEs

Nine additional Space Shuttle Main Engines (SSMEs) will be procured by NASA from the Rocketdyne Division of Rockwell International Corporation, Canoga Park, Calif., under terms of a letter amendment to the firm's present contract for seven such engines.

The amendment authorized Rocketdyne to proceed with manufacture and testing of the nine engines during a 180-day period in which price negotiations will be conducted. The estimated price of the letter amendment is \$250 million.

NASA's Marshall Space Flight Center, Huntsville, Ala., is responsible for design and development of the SSME, as well as two other major elements of the Shuttle—the External Tank and the Solid Rocket Booster.

Three SSMEs are used to power the Shuttle Orbiter for about the first eight minutes of flight. The External Tank holds the propellants for the SSMEs during launch and ascent almost to orbit. Two Solid Rocket Boosters are required for each flight, firing in parallel with the SSMEs to boost the Shuttle from the launch pad up to about 28 miles (46 kilometers).

The nine engines being purchased will provide propulsive support for the Shuttle program up through the first four Orbiters currently approved for production. Engines for the first Shuttle flight, scheduled in 1979, were provided for in the present contract, which also included three ground test engines and one spare. The ground test engines will later be refurbished for flight if needed.

In addition to the nine engines, the contract amendment covers related supplies and services provided by Rocketdyne.

Orbiter neutral buoyancy trainer design and engineering completed

Reduced funding limitations in 1976 shifted the Orbiter Neutral Buoyancy Trainer (ONBT) priority from mainline Orbiter (Rockwell International) to Government furnished equipment (GFE).

Spacecraft Design Division, through the Minority Business Enterprise Office, entered into a contract with the Small Business Administration to have CASPAN Corporation design the ONBT at a cost of \$241,000.

The contract was begun in February 1977 with Rae Chambers assigned as the JSC buyer and George Franklin as the Technical Monitor. CASPAN president, Frank Urteaga, directed the effort through Gerald Faz, the project engineer.

Minimum contract changes were implemented with no additional cost to the Government during the life of the contract. The contract was completed within costs and within schedule in May 1978.

CASPAN, working with master line drawing from Rockwell and some production drawings for the Orbiter, provided the unique design approach to meet the trainer requirements. CASPAN furnished

as specified in the contract, a completed set of engineering and shop fabrication drawings to JSC/NASA.

They also provided a scale model of the design to be used as an engineering aid for the fabrication and operation of the trainer. This engineering aid was produced by Pro Scale Models through a subcontract to CASPAN under the direction of Stan Snyder.

ROUNDUP NASA

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.

Photographer: A. "Pat" Patnesky



CO-OP STUDENT WORKS SHUTTLE: Tandri Benson, shown with two of the Shuttle crewmen Joe Engle, I. and Dick Truly, r., is completing her third tour of duty here at JSC as a co-op student. Since January she has been working with the environmental control systems for Shuttle in the Electrical, Mechanical and Environmental Systems Branch of Flight Control Division. Her first two tours at JSC were in E&D Directorate working with cryogenics and thermal control for Shuttle. Benson is a junior at the University of Washington, Seattle and majoring in energy engineering. She hopes to someday come to a permanent job at JSC.



FEDERAL WOMEN RECOGNIZED—Equal Opportunity Awards were presented in recognition of significant contributions to the Equal Opportunity Program and outstanding accomplishments as members of the Johnson Space Center Federal Women's Program Committee. Left to right seated are: Marilyn Bockting (for her outstanding service in distinguished performance as the lead JSC person in support of the International Women's Year Conference); Mary Ferguson; Sharon Babb. Standing: Estella Gillette; Josephine Jue; Audrey Lemons; Joseph D. Atkinson, Jr. (Chief, Equal Opportunity Programs Office and presenter of awards); Doris Fokes; Mary Louise Sprake; and non-awardee Virginia Hughes (Federal Women's Program Coordinator). Not pictured: Phoncille DeVore and Billie Schmidt also received the award.

rare meteorites ...

(Continued from page 1)

The samples were found in a frozen condition, were kept frozen during their transport from the Antarctic to Houston, and will be kept frozen during the initial

processing. Subsequent studies will be performed by investigators at various laboratories throughout the country.

Cassidy and a team of meteorite searchers are expected to return to the Antarctic again this coming summer season there to continue their meteorite search.