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ROUNDUP

NASA MANNED SPACECRAFT CENTER

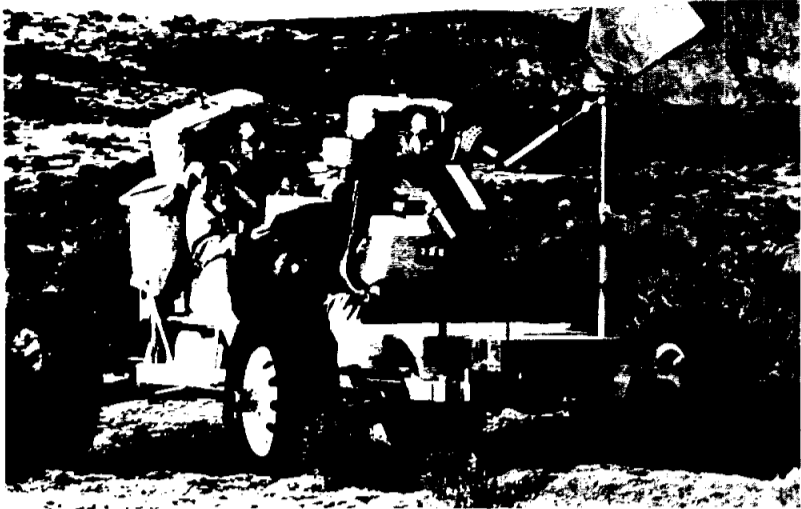
HOUSTON, TEXAS



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June 22 - 25

VOL. 10 NO. 10

MARCH 26, 1971



THE "GROVER"—Apollo 15 astronauts James B. Irwin (left) and David R. Scott practice driving a vehicle similar to the Lunar Roving Vehicle (LRV) which they will use for the first time on the Apollo 15 lunar landing mission. The "Grover" was built by the U.S. Geological Survey at Flagstaff, Arizona.

Gilruth Is Named As 1971 Watt Medalist

The Institution of Mechanical Engineers in London recently notified MSC Director Dr. Robert R. Gilruth that he has been selected to receive the 1971 James Watt International Medal. He was nominated for the award by the American Society of Mechanical Engineers.

In the letter informing Dr. Gilruth of his selection for the high honor, the Secretary of the Institution of Mechanical Engineers

told Dr. Gilruth that the award was "in recognition of your distinguished services to Aeronautical and Space Research and for your engineering leadership which inspired and directed the Manned Space Flights and successful landings on the Moon."

The Medal is named for James Watt, the eighteenth century engineer who was the first to study scientifically the steam engine and
(See GILRUTH, page 3)

Of Rice and Men: New Process Allows "Tap to Table" Preparation

A new "quick and easy" rice preparation process developed for the manned space flight program and used most recently by the Apollo 14 crew may soon find its way to the Nation's dinner table or on camping and hunting trips.

NASA's Invention and Contributions board awarded \$300 to the inventor of the process, Dr. Clayton Huber, an employee of Technology, Inc. and a member

of MSC's team of food scientists.

With hot tap water, the rice can be converted from the dry state to "ready-to-eat" in several minutes, compatible to use in a spacecraft and the household kitchen. The process, by modifying the physical properties of the rice starch through alternating cycles of freezing (two hours at minus 14 degrees) and thawing
(See RICE, page 2)



INVENTIVE SCIENTIST—Dr. Clayton Huber inspects a packet of rice prepared by a new process which he invented. The process affords the dual advantages of making the rice more digestible and easier to fix.



LUNARCAPE ON EARTH—Astronauts Scott (right), Commander of Apollo 15, and Irwin, the prime Lunar Module Pilot, are seen against the panorama of lava flows and mountains near Taos, New Mexico. The area resembles, in shape and dimension, Hadley Rille, a prominent feature of the Hadley-Apennine landing site on the Moon which the astronauts will explore. Backup crewmen Commander Richard F. Gordon and Lunar Module Pilot Harrison H. Schmitt also took part in the geological expedition to Taos. Alfred M. Worden is prime Command Module Pilot, and Vance D. Brand is his backup for Apollo 15 which is scheduled for launch on July 26.

Rio Grande Gorge Proves Good Training Area for Apollo 15 Crew

A team of scientists recently accompanied members of the Apollo 15 prime and backup crews, Commander David Scott and Lunar Module Pilot James Irwin of the prime crew and Richard Gordon and Harrison Schmitt of the backup crew, to a rugged area, part of the Rio Grande River Gorge, six miles west of Taos, New Mexico. The purpose of the trip was to familiarize the astronauts with geological features similar to ones they may encounter in the Hadley-Apennine area of the Moon where they are scheduled to land in late July.

In particular, the area near Taos was selected because of its similarity to what geologists expect members of the prime crew, David Scott and James Irwin, to find as they explore Hadley Rille, one of the main features of the lunar landing area.

A rille is a long trench or val-

ley, akin in appearance to a dry river bed. Dr. Gary Lofgren, who along with Dr. William Phinney, head of the Geology Branch in Planetary and Earth Sciences Division, represented MSC geologists on the trip, explained that there are a number of theories on
(See APOLLO 15, page 2)

April Is MSC's Spring Cleanup Month

The MSC Safety Office, organizational Safety Representatives, and Building Fire Wardens have planned an active cleanup campaign to encourage all employees to make MSC safe and secure. The supervisor's April Safety Kit contains information on MSC cleanup procedures such as inspections, janitorial services, excess property, and records roundup.

The Federal Fire Council, sponsor of Spring Cleanup campaigns for all government agencies, has stated that cleanup efforts provide for an economic efficiency that results in larger dollar savings for program operations. A clean environment means fewer fires, fewer accidents, and improved work morale and effectiveness.

Snoopy and the Red Baron will be waging a battle on cleanup conditions in a special awards campaign. Directorate and division safety representatives will pass out Snoopy Fire and Accident Prevention Awards for meeting cleanup objectives, while the Safety Office will issue Red Baron Fire Hazard Citations for poor housekeeping practices.

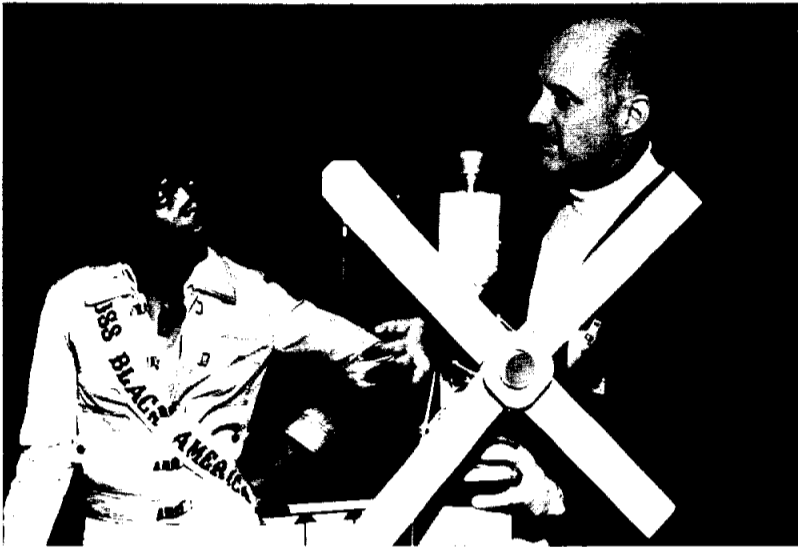
Complete details of the campaign were discussed at the monthly organizational Safety Representative/Fire Warden meeting. Snoopy safety decals, given to employees attending the February and March safety film showings, will also be given at the April film showings. Schedules for the films are in the April Safety kits.

Get your baskets ready: The Egg Hunt Is On!

Saturday, April 3 is the date to mark on your children's calendar. That is the day of MSC's annual Easter Egg Hunt, sponsored by the Employees Activities Association. The "hunting" is scheduled to begin at 1:00 p.m. at the recreation area (near the baseball diamonds) on site. One hundred and fifty dozen decorated eggs will be hidden, and there will be prizes for the bright-eyed, diligent youngster who finds the greatest number of eggs and for the one who finds the beautiful golden Easter egg.

The event is open to children two through eight years of age. Tickets are \$.50 and may be purchased from your EAA representative.





VISITING BEAUTIES—Debi Shelton, Miss U.S.A., and Stephanie Clark, Miss Black America, were recent visitors at MSC. Miss Shelton (above) appears to be giving a word of advice to Astronauts (l. to r.) Alan Bean, Eugene Cernan, and Joe Engle while Miss Clark listens as Thomas Stafford, Chief of the Astronaut Office, explains the model of a space station which he is holding.

Apollo 15's Geological Trip

(Continued from page 1)

the manner in which rilles are formed. A prominent theory is that they form as part of a lava flow. As the exterior of a flow begins to cool and harden, an interior portion remains molten and continues to flow sinuously within the hardened "tunnel." Eventually the tunnel collapses, and the rille is exposed.

Samples taken by the Apollo 15 crew from the Hadley Rille area may indicate whether or not water was a factor in the rille formation. Visual observations and photography of the layering in the rille walls may indicate whether the structures are, in fact, a result of the collapse of lava tubes or "tunnels" or of erosion by, for example, volcanic ash flows or surface materials made to behave like fluids by degassing from the lunar interior.

The Rio Grande Gorge near Taos stretches from 400 to 1500 meters in width. Hadley Rille is consistently about 1500 meters wide. The area around the gorge is covered with lava flows as is the mare material on which the Apollo 15 lunar module will land.

Astronauts Scott and Irwin and backup crewmen Gordon and Schmitt, using a 500 millimeter Hasselblad camera, took pictures of the opposite wall of the rille-like gorge. Practice with the camera gave them the experience of picking out objects of geological interest and importance to be photographed and of determining how much detail might be seen on the opposite wall.

On all geological field trips preparatory to a lunar landing mission, the crews run through periods of simulated extravehicular activity (EVA). They carry cameras and tools like those to be used on the lunar surface, and they also wear foam rubber backpacks to simulate the portable life support systems gear they will use during actual EVA.

Communications between the crew and the Science Support Room (SSR) in the Mission Control Center as they will occur during the lunar landing mission are also simulated. Dr. Joseph Allen and Dr. Robert Parker, who will be the science capsule communicators (capcoms) during Apollo 15, listened to, questioned, and gave instructions to the crew as Scott, Irwin, Gordon, and Schmitt attempted to describe to the capcoms what they were seeing as they walked or rode along the gorge.

The "Grover," built by the U.S. Geological Survey and meant to be partial facsimile of the lunar roving vehicle (LRV) Rover, was used by the crews as they went along the edge of the gorge studying the terrain.

On the lunar surface, the men must decide when to stop the LRV to take pictures or to pick up a rock or soil sample, particularly if the stop is not called for on the planned traverse. Training in the Grover is aimed toward preparing the crewmen to make such decisions wisely.

The Apollo 15 crews have par-

Tower to address Group on Monday

United States Senator John G. Tower of Texas will speak to a joint gathering of the American Astronautical Society, Instrument Society of America, Institute of Electrical and Electronics Engineers, Association of Computer Machinery, American Institute of Aeronautics and Astronautics, and the Marine Technology Society. His subject is "Potential for Texas in Marine Technology."

The Monday, March 29 dinner meeting at the Holiday Inn on NASA Road 1 will begin with a social hour at 6:15 p.m. The program will commence at 8:00 p.m.

Tickets are \$5.00 per person. The deadline for reservations is 5:00 p.m. today. Call Lea Dunaway at 488-4006 or Sandra Davis, 488-0080, x 271.

E&D and WSTF Employees Die

William H. Hilliard, on the staff of the Director of Engineering and Development, and Bobby J. Wood, of the Reliability and Quality Assurance Office at White Sands Test Facility, died on Monday, March 22.

Mr. Hilliard was 46 years old at the time of his death. He had been associated with the Manned Spacecraft Center since September 1963. He is survived by his wife Alice and two children, William H., Jr. and Mary. Cause of death was a heart attack.

Mr. Wood, who had been suffering from leukemia, was 36 years old at the time of his death. He had been at White Sands since August 1963. His survivors include his wife Elizabeth and three children, Laura Sue, Robert Alen, and Deidra Rene.

Rice Process

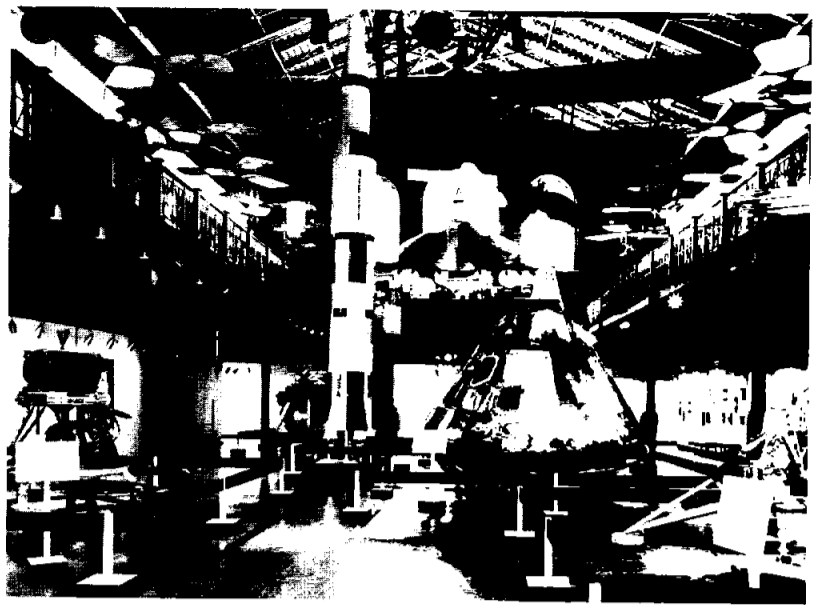
(Continued from page 1)

and through final treatment of freeze-drying, makes the rice both more digestible and easier to prepare.

An advantage to the process, Dr. Huber explained, is that it requires no boiling water or extended steaming. In the spacecraft, the water used is about 155 degrees Fahrenheit, the same temperature as hot water in most kitchens.

In addition to not requiring boiling water, the "space rice" is ready to eat in a matter of minutes. In a recent lab test, a portion of lab-prepared chicken and rice soup, mixed with hot water, was ready to eat in less than four minutes.

anticipated in twelve geological expeditions. Two more trips are planned: one to the Nevada test site to study crater formations, and the other to Coso Hills in California.



SMITHSONIAN EXHIBIT—This display area is part of the National Air and Space Museum of the Smithsonian Institution in Washington, D.C. Some of the items shown here include a Saturn V rocket, the Apollo 4 spacecraft, a Surveyor, and a Lunar Orbiter. Representative of earlier air and space history are the Wright Model A "Military" (1909) and the Curtiss JN4-D "Jenny" (1917).

Have You Thrown Away A Part Of American Space History ... ?

Most MSC employees concerned with having their places of work neat and orderly fall into two categories. The first from time to time throws away everything not in current use. The second type stores away—in excess property, bonded storage, or a handy file cabinet—all of those items not presently being used.

Though the efforts toward orderliness are certainly praiseworthy and necessary, unfortunately, in the process of straightening out and storing away, many items of potentially great importance to a complete history of the U. S. space program are lost or forgotten.

In 1967, NASA signed an agreement with the Smithsonian Institution in which the Smithsonian was named as the official repository for all NASA historical artifacts. The agreement provides that NASA will transfer to the Smithsonian "artifacts currently under NASA control and which will become available in the future, after technical utility to NASA or other governmental agencies has been exhausted and post flight examination has been effected."

In that same year, MSC Management Instruction Number 2700.2 set out the manner in which MSC historical items were to be made available to the Smithsonian. MSC Form 2275, "Availability of Artifacts," was devised so that MSC employees could notify the Public Affairs Office of equipment or documents no longer in use. The Logistics Division was made responsible for arrangements for actual transfer to the museum and for accountability of the artifact.

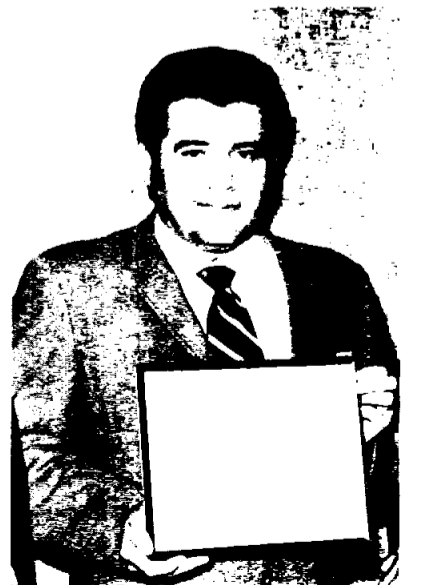
It has been estimated that since 1967 over 20,000 individual items have been transferred by MSC alone to the Smithsonian's National Air and Space Museum which former astronaut Michael Collins was recently named to head. Other NASA centers are

also parties to the original agreement.

The Smithsonian is equipped to preserve NASA artifacts and to display space program history throughout the world for NASA and other requestors. At Expo 70 in Osaka, Japan, the Smithsonian provided nearly half of all NASA hardware exhibited. Contributions to the U. S. space display included Gemini, Mercury, and Apollo spacecraft which have been flown and all of former astronaut John Glenn's personal gear from the historic first U. S. orbital mission.

What, you may ask yourself, does all this have to do with me? Some people mistakenly believe that the only items of historical value are those that have actually been flown on missions. Not so. Look around your offices. That dusty roll of film from Gemini days, the tape long unplayed, blueprints, mockups, training gear, prototypes, flight tools, original drawings of spacecraft — all of these might fill what would otherwise be a gap in the history of the U. S. space effort.

If you know of something which you feel might be of historical value or if you have questions, please contact the Special Events Office, extension 4241.



SERVICE AWARD—Angel P. Griego, a Quality Assurance Specialist at MSC-Downey, recently received a 20-year Service Award.

\$ Credit Union News & Notes \$

CREDIT UNION SHARES INSURED

The MSC Credit Union has qualified for federal insurance of members' share accounts up to \$20,000 each.

Similar to insurance available to banks and savings and loans, the credit union share insurance program is administered by the National Credit Union Administration, an independent agency of the Federal Government. It is authorized by legislation approved by President Richard Nixon in October 1970 and was effective for the first time in January 1971.

The MSC Federal Credit Union was chartered in 1962. With a membership of 5,425 among civil service and associated contractors and with assets of over \$4 million, it will pay a \$2,498.60 premium for insurance this year — 1/12 of one percent of its share accounts, the same fee paid by all credit unions, state-chartered or federal.

Gilruth Award

(Continued from page 1)

who invented the separate condenser and many other parts of steam engines.

The award was first presented in 1937 and is given every other year. Dr. Gilruth is the fifth American to receive the Medal. The first was Henry Ford in 1939.

Presentation of the award is tentatively scheduled to take place in London in the fall.

Tech Library Offers New Books

The MSC Technical Library has recently received three new NASA Special Publications (SP Series).

The first, *A Search for Carbon and Its Compounds in Lunar Samples from Mare Tranquillatis*, SP-257, outlines the information

AFGE Opens Office On Site

MSC Local 2284 of the American Federation of Government Employees (AFGE) has opened an office in Building 45, Room 552.

David Holman, president of the local union, stated that he or a local representative would be in the office and available for consultation Monday through Friday from 10:00 a.m. to 12:00 noon. The phone number is 4277.

Officers of the MSC Credit Union are Harold Ferrese, president; James Moody, vice-president; James DeMuth, treasurer; and Odell Crow, secretary.

QUARTERLY DIVIDEND DECLARED

At their monthly meeting on March 17, the Board of Directors of the MSC Credit Union declared a quarterly dividend of 5½ percent. This is a change from last year when dividends were paid on

a semi-annual basis. The dividends will be credited to shareholder accounts on March 31 and will appear on the first quarter's statement.

AUTO FOR SALE

Sealed bids will be accepted until April 1 on a 1969 Oldsmobile 98 with air conditioning, radio, and automatic transmission.

For additional information, contact the Credit Union in Building 11 at extension 2066.

Golf Association Reveals Results Of The Year's First Tournament

The MSC Golf Association activities for 1971 started off with a bang on March 13 when Bob Epperson, on the 136-yard par three hole at Executive Country Club, hit a shot with a pitching wedge into the hole on the fly. Witnesses were Frank Breshears, Rick Coblenz, and Bob Plunkett.

Cliff Crouch won the championship flight with a net score of 64. Bill Shropshire was second with 66; Bob Heyer was third with 70; and Max Engert, Jim White, and Milt Heflin tied for fourth with 71's.

John Frere won the first flight with a net 66; Jay Harnage was second with a 69; and Bob Reaves and Ed Barker tied for third with 70's. Joe Siefried took the honors in the second flight with a net 66; Daryl Chilcutt was second with 70; Bob Gordon was third with

72, and Jerry Shinkle was fourth with 73.

Winner of the third flight was Steve Gorman with a net 60. Ben Hood was second with 65, and Art Garrison, Tom Bowen, and Richard Williamson tied for third with 73's.

The next tournament will be played at Brock Park on Saturday, April 3.

Please, Keep the Pets at Home

One day not long ago a large white duck appeared on site. That it must be a pet turned loose soon became apparent because it would not eat except out of someone's hand.

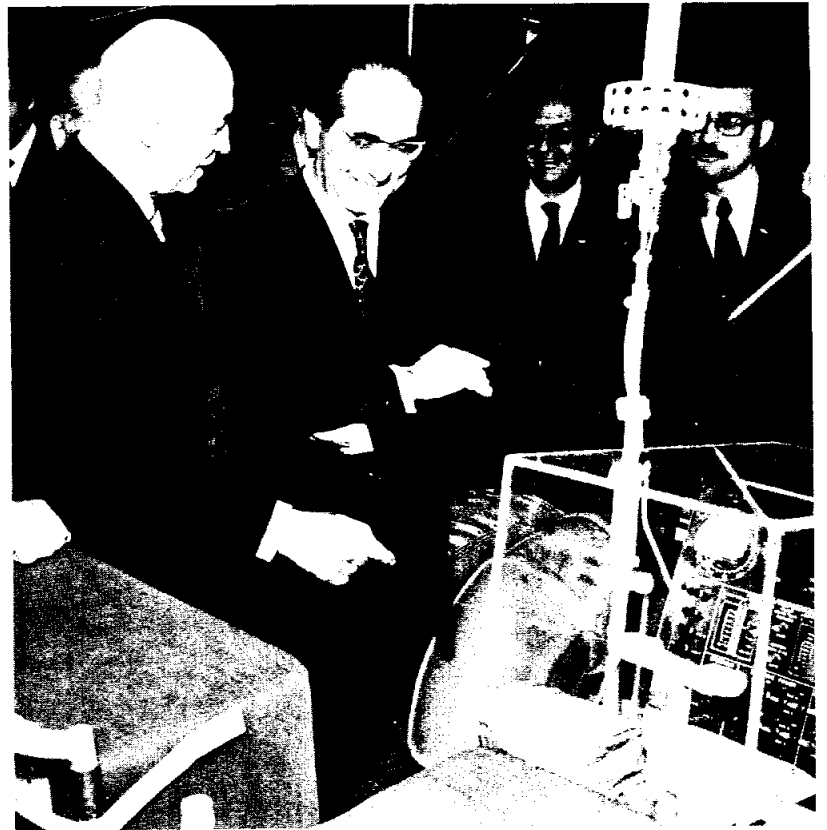
No one had time to hand feed a duck, so it was captured. However, before it could be taken away, an excited employee telephoned and wanted his duck back, saying, "He's my pet, and I love that duck."

When animals, including rabbits, cats, and dogs, are turned loose on MSC grounds, the animals must be captured and given to the Society for the Prevention of Cruelty to Animals (SPCA). Employees are asked not to remove or set off the traps that are set to capture the stray animals.

Several people at MSC have been bitten by animals which roam about the site looking for food. Recently an employee was bitten by a cat which subsequently could not be caught. Because the cat could not be observed to determine whether it was diseased, the employee had to undergo the painful treatment for rabies, a process extremely uncomfortable for the patient and costly to the government.

Easter traditionally brings pets such as ducks, chickens, and rabbits to the homes of MSC and contractor employees. Please, this year keep the pets at home. Releasing them on site is no favor to the animals or to anyone else, for that matter.

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



VISITING DIGNITARY—Italian Premier Emilio Colombo recently visited MSC. He is pictured here (second from left) with MSC Director Dr. Robert R. Gilruth (left) who is pointing out some of the features of the 1-G Lunar Roving Vehicle (LRV) Trainer in Building 5. The LRV will be used for the first time on the Apollo 15 mission.

Engineers Sought for Retraining In Thermal Analysis, Materials Fields

A retraining program for qualifying engineers to work in critical technical areas has been formed at MSC. The program is aimed toward strengthening the Center's engineering capability in the thermal analysis and materials technology fields.

The Structures and Mechanics Division of the Engineering and Development Directorate hopes to fill 18 engineer positions—12 in thermal analysis and six in materials specialties—from within the ranks of engineers in the Directorate. New hiring of engineers is sharply curtailed under present NASA personnel ceilings.

The retraining in the two technical specialties will be done through intensive refresher courses conducted by university engineering faculty and MSC staff and through on-the-job training. The program is scheduled to begin by the end of March.

Engineers applying for retraining in thermal analysis should

have degrees and experience in math analysis, thermodynamics, heat transfer or systems engineering. A degree and experience in mechanical, civil, industrial, chemical or metallurgical engineering is required for retraining in the materials technology specialty.

Interested engineers should call Ted Boyes, extension 4331.

It's That "Batter Up" Time Again!

Uncreak those winter knees and shake the dust out of those baseball duds. It's time for the men's fast and slow pitch softball leagues to be set up.

A meeting with managers is scheduled for Monday, April 5 in Building 2, Room 720. League play, open to NASA, military, MSC-associated contractor employees and their dependents, will begin on May 3.



AWARDS GIVEN—Kenneth S. Kleinknecht, Manager of Skylab Program, is shown presenting Cost Reduction awards to (l to r.) W. Harry Douglas, Robert L. Frost, John F. Stanley, Robert L. Blount, Thomas P. Larkin, Clifford J. Hall, Louis Hammer, Dr. Richard R. Levin, and James C. Shows. Their efforts have resulted in savings to the Government of approximately \$7,800,000, representing 166 percent of Skylab's FY 1971 goal. Missing from the picture is Victor P. Neshyba, whose suggestions brought a saving of \$3,400,000 and who is the second MSC recipient of the monthly \$50 Cost Reduction Award.

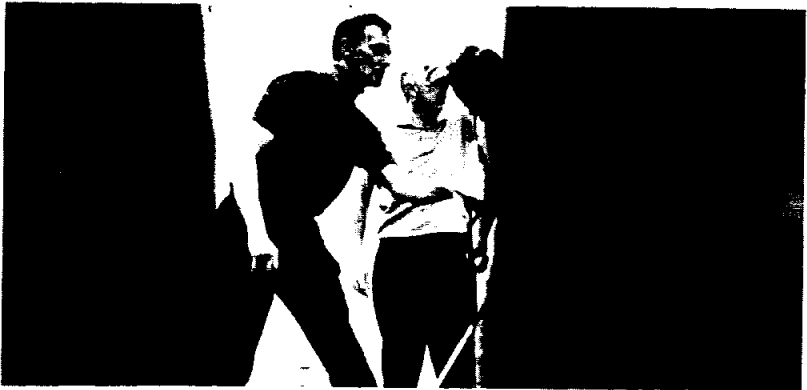
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TREE TRAUMA AND FEARSOME FOURSOME—Ken Hecht (left), Medical Research and Operations, peers apprehensively after his tee shot during the first annual Stuffman Invitational Golf Classic held for the benefit of the Harris County Boys Home. Looking on is Frank Morgan (center) of McDonnell-Douglas and Dave Dougan of MSC. The foursome with the highest team total for 18 holes was the quartet of (l to r.) Bob Malloy, Martin-Marietta; John Stonesifer, Medical Research and Operations; Kenneth Kleinknecht, Manager of the Skylab Program Office; and Ron Swim, North American.

MSC's Resident Research Program Is Described; Participating Scientist Explains His Work

The Manned Spacecraft Center participates in a program which brings benefits to the Center and provides a training ground for talented young postdoctoral researchers.

Called the Resident Research Associateship Program, it is administered by the National Research Council. The stated purpose of the program supported by NASA is "to provide to investigators of unusual ability and promise an opportunity for research in various areas of science having to do with space exploration."

The candidates for research associateships, which last from one to two years, may be United States citizens or foreign nationals. Candidates must have achieved a level of training equivalent to a Doctor of Philosophy or Doctor of Science degree.

MSC began taking part in the Resident Research Associateship Program in 1965, with the appointment of three associates.

Since then, the program has grown steadily, and MSC presently has thirty-one associates in residence, doing research in various areas of the Science and Applications, Medical, Engineering and Development, and Flight Operations Directorates. Of that number, ten represent six foreign countries — Italy, India, Japan, the Republic of China, England, and Germany.

Some of the disciplines in which the postdoctoral associates at MSC are working include geology, astronomy, preventive medicine, geochemistry, environmental physiology, and cosmic ray physics, among others.

Dr. Allen S. Lefohn, whose PhD in chemistry was awarded by the University of California at Berkeley, is one of MSC's research associates. Into his second and final year of the program with MSC, he is with the Earth Observations Division.

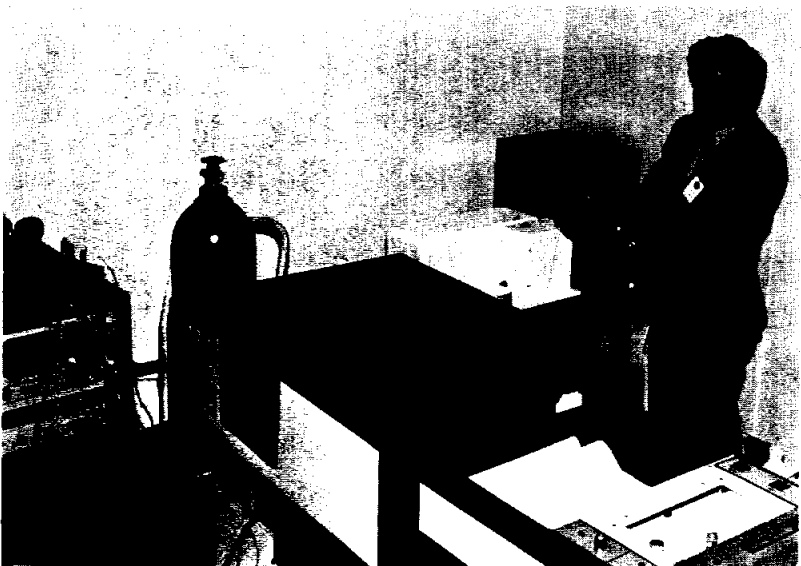
Dr. Lefohn has developed a laboratory that combines for the

first time an interferometer spectrometer, which measures and analyzes electromagnetic radiation given off and reflected by the typical terrestrial objects on which the spectrometer is focused, and a data acquisition system which, Dr. Lefohn says, allows "instant feedback" of information on the target object.

The facility as Dr. Lefohn has developed it, will allow fellow scientists to take measurements of and gather data on any object under controlled laboratory conditions. The object can then be remotely measured in a non-controlled area, in a field, for example. The differences between controlled and non-controlled measurements will provide information on the atmosphere and the ways in which the elements of the atmosphere affect the characteristics of the object in focus.

Dr. Lefohn's greatest emphasis has been on developing the lab facility and capability to use the spectrometer-computer setup efficiently. After his departure, other scientists in the Earth Observations Division plan to continue the initial effort.

Although his plans for the future are not definite, he hopes to pursue the study of atmospheric pollution problems. Of his experience as a postdoctoral researcher at MSC, Dr. Lefohn says, "The challenge to blend creative scientific and engineering efforts together into a synergistic result is one which will long be remembered."



INTERFEROMETER SPECTROMETER LAB—Dr. Allen Lefohn has in his hands the sample holder which is to be placed in the spectrometer, to his right, for measurement of the sample which, in this case, is sand from Santa Monica beach in California. In the foreground is the data acquisition system and to the far left is an oscilloscope which monitors the signal from the spectrometer.

Roundup Swap-Shop

(Deadline for Swap-Shop classified ads is Thursday of the week preceding Roundup publication date. Ads are limited to MSC civil service employees and assigned military personnel. Maximum length is 20 words, including name, office code and home telephone number. Send ads, typed or legibly written, to Roundup Editor, AP3)

MISCELLANEOUS

Aquarium, 10 gallon, complete with reflector, heater, pump, filter and fish, \$22.50. Usery, 488-2278.

Lawn edger, 3-wheel, Craftsman, good cdt, \$30. O'Loughlin, 877-3313 after 5:30 pm. Schwinn bicycles, 24"/\$20, 26"/\$30. Dunn, 472-7478.

Sears Deluxe vacuum cleaner w/all attachments, \$90. Nabours, 424-7782. Sewing machine, electric w/attachments and carrying case, Make: Brothers. Like new, \$30. Bass, 534-3890.

Auto parts from '64 Impala, V-8 engine, transmission, A/C, tires, bucket seats, doors, radio, windows, etc. Jerry, 944-3959. Free 8-ft plywood racing Hydroplane boat, needs fibreglassing. Raina, 488-1326.

Hidabed \$15, portable B&W TV \$15. Derbonne, 534-3669 after 4 pm. Agfachrome top quality 35 mm color slide film, in-date, at less than two cents per picture. Processing and mounting included. Dewey, 453-3697.

'69 Chevrolet, 24,000 miles, camper, long, wide bed, 6 cyl., radio, gauges, \$2300. Vetuski, 864-1688.

14' Glasspar runabout, top accessories. 40 hp Evinrude, both excellent. SW/tilt trailer, fair, \$800. Scarlett, 932-3414.

Woman's bowling shoes, size 7 1/2-8, brand new, never worn, \$5.00. Price, 433-8125.

TV, Philco portable, UHF/VHF, good cdt, w/stand, \$35. Clowdis, 471-2447. Boys/Girls 20 inch convertible bike, \$8.00,

Clair, 946-6344.

15-hp 2-cyl Michigan Marine, ideal sailboat aux engine, strtr & gen need repair, \$100. White, 932-4472.

Loom, 45" LeClerc, 4 harness, Counter balance, sectional beam, \$175. Gray, 488-1549.

16' fiberglass boat, 85 hp Mercury motor, big wheel tilt trailer, \$975. Stutesman, 946-5117.

Rent a Cessna 205, 6 seats, IFR equipped, 155 MPH cruise, \$23 per hr. wet. Malone, 644-2441.

'69 White frigidaire jet-action washer, new condition, best offer. Bowling, 481-0484.

Two gold velvet love seats, \$155 each; child Mangus chord organ, \$12; record cabinet, \$15; girl's 26" bike, \$15. Barrow, 488-1966.

Baywood country club membership \$270. Leonard, 944-4997.

Camping tent, 9'x12', Hettrick, \$55, Thomas, 481-2454.

Colonial coffee table and two lamp tables in good cdt, \$20 for all three. Brown, 488-0649.

Early American rocker, wood w/peds, xln cdt, \$10. Colton, 488-2962.

Dishwasher, Frigidaire, new 1971 model DW-CDUP under counter, custom deluxe, avocado, new warranty, \$165. Johansen, 932-2039.

EICO 460 oscilloscope in new condition w/ high impedance probe, \$70. Whittle, 932-5239.

16 1/2' solio cypress fishing boat & trailer \$150. Burke, 534-6007 evenings.

Lovely wedding gown w/mantilla train, xln cdt, size 12, a steal at only \$50. Eickmeier, 471-2526.

24" Coppertone deluxe stove, includes light, timer, used for 2 months, \$99. Cost \$189 new. Mendenhall, 591-3531.

Boat 23' CC, blue w/white top, 185 HP in-board, new paint, xln cdt, completely equipped, S/S, DF, stove, price best offer over 2K. Chase, 591-2752.

VEHICLES

70 Toronado, AM-FM stereo, A/C, extras, warranty, 21,000 miles, \$4290. Rainey, 474-2937.

'64 Valiant V-8, A/C, radio, heater, auto shift, hard top, runs fine, \$270 or high bid. Zill, 932-4265.

'63 Corvair, 2-dr white, engine & 4 sp transmission rebuilt, radio, new clutch, 71 lic., good condition. Charles, 481-2940.

'69 Dune Buggy, red metal flake, top and side curtains, chrome trim, \$875. Streit, 482-1559.

'64 Chevrolet Impala, 4-dr HT, V8, A/T, A/C, AM, recent transmission and brake overhaul, new muffler and battery, good tires, xln second car. Bass, 534-3890.

'69 VW MICRO-Bus, 9-passenger, new tires, AM/FM, vinyl interior, VA credit union, \$1950. Fix, R17-3000.

'57 Olds, good work car, \$125. Poindexter, 483-4434.

'66 Oldsmobile 98, new paint, power windows and seat, good running condition, wholesale. Waddell, 932-3881.

'69 Suzuki TC-120, xln cdt, \$325. Lizza, 932-4663.

'62 Plymouth wagon, many extras, driven daily but needs work. Highest offer by March 30. Laughon, 534-5057.

'67 Cadillac sedan Deville, hardtop, all extras, new tires, \$2295. Call 926-8994. Honda 50 cc Minibike, good cdt, \$170. Leonard, 944-4997.

'66 Olds, convertible, loaded, xln, \$300. Less than dealer at \$995. Bowling, 481-0484.

'53 Ford w/broken rod free, you haul it off. Brenelle, 488-5085.

'67 Chevy Belair wagon, 327 V8, 3-seat, auto, air, power steering and brakes, chrome rack, equalizing hitch, \$1250. Fitch 482-3857.

'67 Mustang, air, auto, radio, very clean. Also '67 Firebird, air, radio, 3-speed. Lilly, 877-1198.

'67 Olds Cutlass, 2 dr hardtop, air, power,

vinyl top, good tires, xln cdt, one owner, \$1395. Hartman, 488-2754.

'54 Pontiac, xln mech. cdt, \$150. Burke, 534-6007 evenings.

'68 Mooney Statesman M-20G TT. 1350 hrs., 500 STOJ December Annual, 360 Mk. 12A, EGT, P.C. \$11,900. Fulkerson, 481-2771 or 644-2441.

REAL ESTATE AND RENTALS

Waterfront apt in Nassau Bay to sublet for summer starting June 1, fully furnished, one bedroom, \$160/mo. Kuznetz, 591-3483.

Mobile home, 2 BR, washer-dryer, central air and heat, xln cdt, \$4750. Nabours, 424-7782.

Clear Lake City, 3-2-2, xln cdt, near schools and shopping, \$270/mo. lease. Palmer, 488-6483.

Clear Lake City, 3-2-2, low down and assume loan, xln cdt, near schools and shopping. Palmer, 488-6483.

Clear Lake City, 2-1-2 brick, fireplace, assume 5 1/4% loan plus equity. Call 488-3512 after 5 pm.

Furnished three bedroom home for lease for three months in Friendswood, available now. Krchnak, 485-2355.

Clear Lake City townhouse for lease, 1 1/2 bath, 2 BR, carport, patio, washer and dryer, storeroom, with or w/O bills paid, available April 1. Deans, 488-4009.

Dear Park, 4-2-2, fenced yard, near elementary school and San Jacinto College, equity, 6 3/4% loan, \$147 payments, total \$22,600. Bird, 479-3827.

Secluded cabin deep in Sam Houston National Forest. For lease by day/week, ideal for hunting or just getting away. Leonard, 944-4997.

El Cary estates, beautiful wooded corner lot 132'x180', reasonable, privileges to private park with waterfront on Clear Lake. Giralda, 944-7632, or 644-2421.

3-2-2 brick veneer, central heat and air, paneled den, Newport-League City, \$220/mo. rental. Scarlett 932-3414.

Clear Lake City, 4-2-2 Golf course lot, screened patio, fenced, trees, walk to grade school, assume 6% or FHA. Vincze, 488-1040.

Treasure Island (at San Luis Pass) large corner beach lot, one minute from water, terms. Kaltenbach, 464-2425.

Mobile home, 8x30, 1/2-acre space, for rent at \$135/mo., bills paid. Burke, 534-6007 evenings.

WANTED

35mm or 126 camera. Thompson, 932-3653.

Boys 26-inch English-style bicycle, must be at least 3-speed with one operating handbrake. Any working condition except rusted out mechanism, pay up to \$25. Boynton, 944-9219.

Used chest of drawers, cheap, finish can be bad, structure must be good. Richeson, 482-1064.

Foreign postage stamps and U. S. commemorative stamps. White, 474-3320.

Set of Encyclopedia Britannica - senior, any binding. Dusty, 472-6002.

Ride from Allen Parkway and Shepherd to Building 2. Landon, 529-1302.

Kindness instant hair setting kit. Will pay \$10. Bass, 591-3222.

Interested in buying equity from owner in Nassau Bay. Prefer contemporary. Brown, 591-3103.

Wanted: Equity in home. NASA area; 3-2-2 or 4-2-2. Clear Creek or Friendswood School District. Kline 433-4441.

PET ADS

Registered AKC poodle puppies, chocolate, 10 weeks old, Champion stock, 2 females, 1 male, toy and mini-toys. LaFavers, 944-0848.

Toy poodle puppies, white, AKC registered, six weeks old, 3 males, 1 female. Usery, 488-2278.

Toy poodles, apricot, AKC pedigree, cash or trade for something of equal value. Banks, 481-0744.

AKC registered Basset puppies, tricolor, w/ xln markings at a very reasonable price. Price, 488-0649.

Wire Fox Terrier puppies, AKC, 8 weeks old, beautiful markings and xln dispositions, 2 males and 2 females. Spurlin, 488-3745.

Poodle, "Pick-of-Litter" puppy, 5 months old, black, male, AKC registered, \$50.00. Medlock, 946-9493.

LOST AND FOUND

Found, Siamese cat in Clear Lake City, claim by describing cat and color. Brendle, 488-5085.

Found, lady's grey-green sweater, blue plaid trim, may claim in room 317, bldg 45. Perkins, 483-5427.

SAMPE To Hear Report on Cancer Research Efforts

Dr. Walter Burdette, Director of the National Cancer Institute Office at the University of Texas M. D. Anderson Hospital, will speak to the Society for Aerospace Materials and Process Engineers (SAMPE) on the subject "Progress in Cancer Research."

The dinner meeting is scheduled for the King's Inn on Wednesday April 7 at 6:30 p.m. and is open to all interested in attending. For reservations, contact Charlie Moore at 488-0850, x2153 or Lubert Leger, x5539.

Zero In On Safety