

# Crew in Good Health; Rock Testing has begun

Astronauts Alan B. Shepard, Jr.; Stuart A. Roosa, and Edgar D. Mitchell, the crew of Apollo 14, remain in quarantine in the Lunar Receiving Laboratory (LRL), where they have been confined since transferring from the Mobile Quarantine Facility (MQF) to the Crew Receiving Area of the LRL in the early hours of the morning on Friday, February 12.

Thus far the three moon-travelers have shown no signs of illness. If all continues to go well, they will be released from quarantine at 8:00 tomorrow morning. Plans include an awards ceremony with the crew here at MSC tomorrow and a press conference to follow Monday in Washington, D. C.

Senior management officials from the Office of Manned Space Flight, NASA Headquarters; Kennedy Space Center, Marshall Space Flight Center, and MSC were briefed by Shepard, Roosa, and Mitchell in a Program and Project Debriefing last week.

Mrs. Mitchell, Mrs. Shepard, Mrs. Roosa, and their families have visited the astronauts in the

LRL. But conversations with the participants separated by glass are less than satisfying. All three families look forward to real reunions this weekend.

Other activity in the LRL revolves around experiments being conducted on the lunar rock and soil samples returned to Earth by the Apollo 14 crew.

The first rock box (called Apollo Lunar Sample Return Containers, abbreviated ALSRC), which included lunar material from the farthest portion of the astronauts' second moon walk, was opened on Friday, February 12.

Altogether, four tote or "weigh" bags and two ALSRC's filled with rock samples were brought back by Shepard and Mitchell.

Although the final weight of the lunar material has not been precisely determined, Dr. Daniel H. Anderson, Planetary and Earth Sciences Division, stated that the 95 to 96 pound approximation is still good to within two pounds. All of the containers have been opened, and analysis has begun on all the samples.

(See *SCIENTISTS* page 3)

# NFPA Selects Center As Fire Safety Winner

Dr. Robert R. Gilruth, MSC Director, announced recently that the Manned Spacecraft Center has won the Grand Award in the Government Division of the 1970 National Fire Protection Association (NFPA) Fire Prevention Contest.

In his letter to Dr. Gilruth, Mr. Charles S. Morgan, NFPA General Manager, stated, "You will note that you had plenty of competition, so this is a very real achievement." Over 800 contest entries were submitted by government installations throughout the United States and Canada.

The MSC entry presented graphically the story of fire prevention activities throughout the

past year. A combination of photographs and documents portrayed all phases of the fire prevention program from organization and management to plans for the future.

Fire Prevention Week activities were highlighted as were the activities of other special campaigns such as Spring Clean-Up Week, fire safety during the Christmas season, and vacation time fire prevention measures.

The unifying theme in the entry was "Astronaut" Snoopy acting as a guide for the NFPA Fire Dog Sparky on a tour of MSC and its prevention effort.

(See *SAFETY AWARD* page 3)

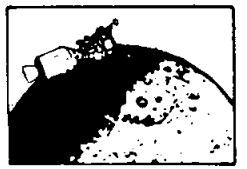


**PRESENTATION TO BOYS' HOME**—Employees of the former Administration Directorate collected money rather than exchanging Christmas cards last December. The money was used to purchase tools and handicraft materials for the Harris County Boys' School. Viewing some of the items are (l. to r.), School Superintendent John A. Peters, Philip H. Whitbeck, William A. Stransky, and Joseph V. Piland.

# ROUNDUP

NASA MANNED SPACECRAFT CENTER

HOUSTON, TEXAS



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**LARGE LUNAR ROCKS UNVEILED**—Astronaut Edgar Mitchell (left) points out the angularity of one of the "football" size rocks brought back from the lunar surface by the crew of Apollo 14. Astronauts Stuart Roosa (center) and Alan Shepard (right) bend down for a closer look at the valuable specimens from the Fra Mauro region of the Moon. Observers in the background include (l. to r.) Ralph H. Culbertson, Mobile Quarantine Facility Engineer; Dr. Craig L. Fischer (directly behind Roosa), Chief of Clinical Laboratories, Preventive Medicine Division; and John E. Riley of the Public Affairs Office. Commander Shepard and Lunar Module Pilot Mitchell spent 33 hours and 30 minutes on the Moon's surface, 9 hours and 17 minutes of which were spent in extravehicular activity. Command Module Pilot Roosa orbited the moon in the "Kitty Hawk" and photographed possible future landing sites while his crewmates explored the lunar surface.

## Major Changes Are Made in Three Directorates

Major reorganizations within the Science and Applications, Medical, and Flight Crew Operations Directorates were announced last week by MSC Director Dr. Robert R. Gilruth.

In the Science and Applications Directorate, two new divisions and a program office have been established and will replace the Lunar Missions Office, Earth Orbital Missions Office, Space Physics Division, and Lunar and Earth Sciences Division.

The new divisions are the Planetary and Earth Sciences Division, to be headed by Dr. Paul W. Gast, and the Science Missions Support Division with John G. Zarcaro named as Chief.

Allen H. Watkins will head the new Earth Observations Program Office, which will manage MSC activities in the area of aircraft remote sensing.

The Planetary and Earth Sciences Division will develop, support, and perform research in geochemistry, geophysics, space radiation, geology, physics, and astronomy. The Science Missions Support Division will plan and implement experiment programs within the Science and Applications Directorate and integrate those programs with other activ-

ities in support of manned space flight.

In the Medical Directorate, the Biomedical Technology Division has been renamed as the Project Support Division, and John C. Stonesifer has been selected as Chief. The division will have engineering responsibilities relative to the development, qualification, and supply of medical operations equipment and experiments.

Within the Flight Crew Operations Directorate, the Flight Crew Support Division has been replaced by Crew Training and Simulation Division, to be headed by C. H. Woodling; Flight Crew Integration Division, with Dean F. Grimm as Chief; and Crew Procedures Division, with James

W. Bilodeau assigned as Chief.

Warren J. North, formerly Chief of Flight Crew Support Division, will assume duties as Assistant Director for Space Shuttle in the Flight Crew Operations Directorate.

## Low to Present Awards Tomorrow

Dr. George M. Low, Acting Administrator of NASA, will conduct a special Honors Awards Ceremony in the Building 1 Auditorium at 10:00 a.m. tomorrow. Dr. Christopher C. Kraft, Deputy Director of MSC, will also take part.

The ceremony will honor those people who contributions were

(See *AWARDS* page 3)

## Barnes to Speak Tonight on Ecology

Texas Lieutenant Governor Ben Barnes will be guest speaker at a joint dinner meeting of the American Astronautical Society, Instrument Society of America, Association of Computer Machinery, Institute of Electrical and Electronics Engineers, and the American Institute of Aeronautics and Astronautics. The meeting will be held tonight at the Holiday

Inn on NASA Road 1. Barnes' subject will be "Texas' Approach to Ecology."

A social hour, beginning at 6:15 p.m., will precede the dinner. The program is scheduled to start at 8:00 p.m. Tickets are \$5.00 per person. For reservations, call Lea Dunnaway at 488-4006 or Lu Demakes at 488-2500.



SERVICE AWARD PRESENTED AT MSC-DOWNEY—William F. Fitzgerald (center), a Quality Assurance specialist, was recently presented with a 30-year Service Award certificate. Making the presentation are Jack Davison (right), Chief of the Quality Assurance Office at MSC-Downey, and M. W. Collins, Chief of the Spacecraft Manufacturing and Test Support Branch.

## Over 40 Million See Moon Rocks, Visit Space Agency Facilities

Over forty-one million people in the United States and abroad lined up in 1970 to look at samples of rocks brought back from the Moon by the crews of Apollo 11 and 12. Another two million visited NASA facilities in the United States.

At EXPO '70 in Osaka, Japan, almost 14 million persons viewed a lunar rock sample which was

## Gals, Take Note!

The Employees Activities Association (EAA) is organizing athletic activities for women for the first time this year.

On Monday, March 8, a meeting will be held at 5:15 p.m. in Room 720, Building 2 for managers and players interested in forming a women's volleyball league.

League play, including a practice round, will begin April 5, tentatively set for the Ellington Air Force Base Gym.

On Thursday, March 11, managers and players interested in

one of the world fair's major exhibits.

In the United States, the rock samples were shown at some 128 events covering all 50 states with a total attendance of 12 million. Thirty-seven states had an opportunity to display a sample as part of a 50-state tour of the Apollo 11 command module and a lunar sample. The tour is due to end in May with Hawaii and Alaska as the last two stops.

Outside the U.S., samples were shown to almost 30 million people in 110 countries.

During 1970, about three million visitors were attracted to NASA centers across the country. The largest numbers of people visited Kennedy Space Center and MSC, each of which was host to well over a million guests.

establishing a slow pitch softball league will meet in Building 2, Room 720 at 5:00 p.m. Games will be played at MSC.

EAA Sports Programs are open to NASA, military, and MSC-associated contractor employees and their dependents.

## 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)

### VEHICLES

- 65 Pontiac Bonneville, 4 dr HT, air, radio, full power, xln cdt, one owner. Ford, 944-4646.
- 64 Rambler Classic, 2 dr, pwr steering, air, radio, best offer. Dardo, 932-4315.
- 67 Chevrolet BelAir 9 passenger wagon, A/C, auto, pwr steering, brakes, equalizer hitch, wiring, electric brake switch. Fitch, 482-3857.
- 67 VW, good condition, radio, new battery, brakes, points and plugs and muffler, \$850. Akin, 942-3153.
- 67 Firebird, radio, heater, air, mags, 3-speed, 400 engine, newly overhauled, 4600 mi on car, \$1300. Conlon, 453-6788 after 6 pm.
- 69 Olds Cutlass Supreme, 2 dr, vinyl top, air, bucket seats, 4 on the floor, radial tires. Campagna, 591-2974.
- 67 Riviera, full power, stereo FM, new tires, chrome wheels, \$1895. Oczkowski, 926-8994.
- 57 Triumph TR3, \$800 or best offer. Johnson, 591-3186.
- Dune Buggy, apricot flavor body, Convair engine, show car, \$1500. Sanchez, 488-1362.
- 64 Valiant V-8, hard top, A/C, radio, heater, runs good, \$270 or highest bid. Zill, 932-4265.
- 62 Pontiac Bonneville convertible, pwr steering and brakes, good tires, xln engine, top needs work, \$300. Patterson, 482-2011.
- 65 T-Bird "Landau", runs good, interior xln, needs paint, \$550. Horton, 474-2102.
- 70 Honda, 350 Motorsport, good tires, low mileage. Mason, 483-3496 or 945-6802.
- 65 Pontiac, 4 dr., sedan, AM/FM, A/C, A/T, power steering/brakes, all vinyl interior, one owner, \$600. Frank, 471-2848.
- 65 GTO, gray w/black interior, A/T, A/C, AM, recent brake and valve jobs, new muffler, good tires, xln cdt, \$900. Pawlowski, 591-2095.
- 67 Toyota Corona, Sedan, A/C, \$875. Johnson, 483-4901.

### MISCELLANEOUS

- Sears, Sahair electric roller kit, regular price \$25, asking \$15. Used very little. Lewis, 479-1197.
- Underwood standard typewriter w/wide carriage, \$20. Smith, 471-1984.
- Clear Lake Country Club membership \$100. Original cost \$450. Kitts, 488-4058 after 4:30 pm.
- Bedroom suite, four pieces, antiques gold on white, \$65. Laughon, 534-5057.
- Station wagon luggage carrier, fully enclosed, xln cdt. Brubaker, 932-4253 weekends or after 6 weekdays.
- 24" boy's bike, blue w/back fender seat, great cdt, must sell, \$19. Schwinn Sting Ray boy's bike, lime color, like new, cost \$55, must sell for \$29. Horton, 877-4102.
- Refrigerator, G. E. 13.5 cu ft, auto defrosting, swing-out adjustable shelves, adjustable door shelves, large drawer type freezing compartment, yellow, good cdt except fan motor needs repair, \$30. Lamoreux, 488-4459.
- REK-O-KUT hi fi stereo turntable w/ESL tonearm and Shure magnetic cartridge, w/lacquer motor board and walnut base, \$25 complete. Wardell, 591-3587.
- 16' wood sail boat, trailer, 2 sets sails, needs work, reasonable. Call 488-1764 after 4 pm.
- Stroller, high chair, car seat, baby carrier, baby bath tub, hair dryer, all like new, best offer. Dardo, 932-4315.
- Contemporary dining table w/4 chairs, xln cdt, six ft long w/leaf, \$85. Grissom, 932-4206

- Ludwig drums, base, snare, 18" Zildjian, 16" cymbals, top hat. Mark, 488-5037.
- Playmaster, 18 ft, fiberglass boat, windshield, top, OMC I/O drive, tilt trailer, skis, life jackets, etc. \$1600. Wooley, 482-1354.
- Surfboard, bing, lightweight, pintail, 9'4", \$40. Will trade Walther P-38 for Walther PPK-32. Beers, 482-1462.
- Used model railroad equipment (Lionel-027 gauge). Guthrie, 946-7848.
- Sears Kenmore 4-cycle washer and dryer, 1 yr old, \$225. Call 488-5687.
- Zenith stereo record player, 6 speaker w/ record rack stand, perfect cdt, beautiful tone, new diamond stylus. Bilodeau, 482-7990.
- Rent a Cessna 205, 6 seats, IFR equipped, 155 MPH cruise, \$23 per hr wet. Malone, 644-2441.
- Early American green recliner \$40, Colonial Birch end table, perfect \$50. Sprague & Carlton pine headboard & footboard \$50. Payne, 485-3821.
- Camping ten, 9' x 12' Hettrick, \$55. Thomas, 481-2454.
- 17' Invader tri-hull, 1000SS Mercury 100hp, plus Dilly trailer, \$2150. Fox, 591-4460.
- Flute, Artly, good condition w/case, \$125 or best offer. Alford, HUB-3484.
- "Go Cart" Dual motor mounts, one 10 horse West Bend engine, \$175. Alford, HUB-3484.
- White, traditional, 4-tiered lace wedding dress, train and veil, size 5-6, xln cdt, \$40. Schmitz, 479-3851.
- 5-piece dinette set; lamp table; antique fireplace tools; rural mailbox. Richichi, 488-4487.
- Gibson guitar, full auditorium, size-model

L7N w/electric pickup, birch top, birdseye maple sides. Haines, 928-3595.

Camper, converted 1 1/2 ton Metro Van, rusted, mechanically good, ideal hunting/fishing, butane & water systems, \$300. 471-5161.

### PETS

Male poodle puppies, 6 wks old, 1 silver, 1 brown, AKC registered. Lewis, 479-1197.

### REAL ESTATE & RENTALS

Home for lease one year beginning June 15, in Clear Lake area. Williams, 488-2713.

3-2-2 brick, fireplace, wooden shingle, guttering, 6 1/4% loan with \$13,500 balance, \$130/month, equity, Friendswood. McCafferty, 482-1369.

1969 "Rocket" mobile home, 12x66', 2 bedrooms, carpeted, washer, dryer, disposal, dishwasher, central air. Marzano, 481-4003.

Mobile home, two bedroom, 1970 DeSoto, 50x12, carpet, central air/heat, Spanish decor. Walker, 483-2658.

El Jardin, Spanish 3-2-2, utility room, fenced with patio. Whitehead, GR4-3517.

Clear Lake City, 2-1-2, brick, Olde English, W/B fireplace, roman bath, landscaped, fenced yard, all elec. kitchen, convenient to rec center, shopping, 6 1/4%, \$164/mo. Burton, 488-3751.

### WANTED

Chain saw in good condition. Smith, 471-1984.

Someone to join me in a car pool from the Gulfgate area to NASA, Mon. thru Fri. Times can be arranged. Adams, 649-6073 after 6 pm.

Radio for 67 Rambler American, working or not. Young, 483-5031.

## Space Spectrometer To Be Used In Underwater Research Project

A miniature mass spectrometer, originally miniaturized to detect harmful gases in manned spacecraft, may now be utilized for measuring beneficial gases underwater.

The device has been loaned by NASA's Flight Research Center at Edwards, California, to the University of Miami's School of Marine and Atmospheric Science in Florida. It is to be used on the underwater research vehicle Hydro-Lab, scheduled for operation in late spring.

In the undersea tests, the mass spectrometer will be used to study photosynthesis, the process in which plants use energy in the form of light to convert carbon dioxide to carbohydrates, of marine organisms.

Because the mass spectrometer system enables simultaneous monitoring of both oxygen production and consumption, it has special advantages for studying oceanic primary production and contribution made by the Seas to our global food supply.

The large spectrometer used onboard surface research vessels in earlier studies necessitated bringing the biological samples to the surface, exposing them to changes in pressure, light, and temperature. The miniature instrument will allow study of the marine organisms in their natural environment.

### Jimmy Warren Memorial League BOWLING STANDINGS

Achievers	59	33
Pin Pounders	53	39
Bit Pickers	51	41
Real Timers	49	43
Alley Oops	49	43
Hexes	47	45
Roadrunners	43	49
Strikers	43	49
Fabricators	42 1/2	49 1/2
Chokers	40 1/2	51 1/2
Mixers	40	52
Blitzers	35	57

the 1971 season and is in the throes of a membership campaign. Applications have been mailed to the 80 members who participated last year. Anyone else interested in joining this year should contact Ivan Ertel, x2838. Deadline for entry is March 5.

The first 1971 tournament will be held at the Executive Club March 13 at 10 a.m. Green fees will be \$6.

## Joint U.S. - USSR Editors Meet

The Joint United States-USSR Editorial Board for the preparation and publication of a review of space biology and medicine convened earlier this month in Washington, D.C., for a three-day session. It was the second meeting for the group of scholars.

The joint review of research in space biology and medicine is being carried forward under an October 8, 1965 Memorandum of Understanding between NASA and the Russian Academy of Sciences. The agreement provides for a joint editorial board and for full cooperation by both sides in preparation of materials available in the two countries, selection of authors, and publication of their work.

Presiding at the meeting were the Board Co-Chairmen, Professor Melvin Calvin of the University of California and Oleg G.

Gazenko, Director of the Institute of Medical Biological Problems, Soviet Ministry of Health.

The first meeting of the Joint Editorial Board was in Moscow in April 1970.

## Golfers Elect New Officers

At its February meeting, the MSC Golf Association elected officers for the 1971 season. Named to posts in the organization were Milt Heflin, president; Ivan Ertel, vice-president and membership chairman; Dave Dyer, tournament chairman; Bill Shropshire, rules chairman; Jim White, trophies and prize chairman. Bill Whipkey was appointed as treasurer, and John Jones was appointed handicap chairman.

The Association is planning for



IN MEMORY OF

YURI GAGARIN



FIRST MAN IN SPACE, APRIL 12, 1961

FROM THE ASTRONAUTS OF THE UNITED STATES OF AMERICA.

JOHN H. GLENN, Jr.  
for  
MERCURY ASTRONAUTS

JAMES A. MCDIVITT  
for  
GEMINI ASTRONAUTS

NEIL ARMSTRONG  
for  
APOLLO ASTRONAUTS

COSMONAUT MEMORIAL—Dr. George M. Low, Acting Administrator of NASA, recently presented to the USSR a plaque in memory of Soviet Cosmonaut Yuri Gagarin, who made the first flight into space on April 12, 1961. General A. G. Kuznetsov, commander of the Star City Space Base, accepted the plaque in a Moscow ceremony. Gagarin, who made history with his one-hour-and 48-minute flight, died in a training accident in 1968. The plaque was inscribed by John Glenn, representing the Mercury Astronauts; James McDivitt, representing the Gemini Astronauts; and Neil Armstrong for the Apollo Astronauts.



**BAYOU VIEW**—Spanish moss provides a soft frame for this tranquil scene along Armand Bayou. Each bend along the winding stream brings a quietly inviting view of untouched natural beauty. A canoeist's paradise, the bayou is to the north and east of the Manned Spacecraft Center.

## Natural Beauty of Bayou Area Is Described by MSC Enthusiasts

*To him who in the love of nature holds  
Communion with her visible forms, she speaks  
A various language; for his gayer hours  
She has a voice of gladness, and a smile  
And eloquence of beauty, and she glides  
Into his darker musings, with a mild  
And healing sympathy, that steals away  
Their sharpness, ere he is aware.  
William Cullen Bryant*

Bryant, an American poet, wrote those words over a hundred years ago in the poem "Thanatopsis." Today, nature and her "various language" hold new

## Suggestion Money Is Presented

Glenn M. Ecord of the Structures and Mechanics Division, Hestle A. Johnston, Quality Assurance Division; and Mark C. Heath, Aircraft Operations Office, recently received suggestion awards.

Ecord noted that in conducting fracture mechanics tests on metals to establish compatibility of fluids and materials used in spacecraft, the procedure had been to use a tensile test specimen with one preflaw. He proposed the use of a tensile specimen with three flaws of different sizes, a suggestion which reduced costs and provided greater testing efficiency. He accepted a check for \$150.

Johnston and Heath each received \$25 suggestion awards.

meaning for the growing number of people concerned with Earth's diminishing resources and spots of natural beauty.

To many Houston and Bay area residents, a particular spot of wilderness beauty they hope to preserve runs along Armand's Bayou (formerly Middle Bayou), Horsepen Bayou, and Mud Lake. The area is to the north and east of the Manned Spacecraft Center.

Three employees of the Mission Planning and Analysis Division, Richard J. Labrecque, James V. West, and Veit Hanssen recently spent a leisurely weekend afternoon canoeing the approximate ten-mile length of Armand Bayou and Mud Lake. They took many slides and moving pictures along the way which they hope to use in presenting programs and publicizing the effort to preserve the natural beauty of the area.

Labrecque commented on the serenity of the bayou which he said suddenly came to life on uncountable occasions with thousands of fish as the canoe slipped through the water. He spoke of places where trees, thick, grey-green with Spanish moss, formed arches through which rays of the sun shone on the shimmering water.

A number of conservation groups, including the Sierra Club and the Audubon Society, are active in the efforts to preserve as a wilderness area, approximately 3,000 acres surrounding the two bayous and Mud Lake.

David Marrack, writing in the January bulletin of the Houston Audubon Society states,

## Scientists Analyze Apollo 14 Lunar Rock Samples

(Continued from Page 1)

One of the rocks contained in the first box was the white rock fragment described vividly by the crew while they were on the lunar surface.

In a briefing shortly after the first box was opened, Dr. Robin P. Brett, Chief of the Geochemistry Branch in the Planetary and Earth Sciences Division, stated, "It's getting towards being almost pure white, as far as rocks go. It doesn't appear to be an igneous rock. There are small angular gray inclusions of some other material than the white material which we are looking at, but I don't think any more can be said at the moment."

Work on determining the nature and composition of this interesting specimen continues. Measurements of the potassium, thorium, and uranium content of the white rock have already been accomplished.

The first experiment conducted on the rocks was a gas analysis experiment in which the rock box is punctured and gases are pumped out with a cryogenic pump. One purpose of this process is to determine whether the box has leaked. The main scientific purpose is to see whether the rocks emit any indication of lunar atmosphere, i.e., any gases which may have been trapped in the box while it was on the lunar surface.

The tote bags containing "foot-  
"This bayou (Armand) still represents an area of untrammelled beauty, a place for solitude and dreaming dreams, a place to study the natural phenomena of and ecology of bayous of potential great educational value to local schools, colleges and scout groups among others. This group of bayous forms an area of outstanding character, a living museum of a gulf coast bayou and a place of great intrinsic beauty. This is the only area near Harris County left with such features."

Future canoe trips are planned. For information contact Labrecque, x6347.

## NFPA Award

(Continued from Page 1)

The NFPA Fire Prevention Contest, now in its forty-fourth year, aims to stimulate universal fire safety in both public and private fire prevention efforts.

Dr. Gilruth has received letters of congratulation from Dr. George M. Low, Acting Administrator of NASA, and Mr. Dale D. Myers, Associate Administrator for Manned Space Flight.

In his letter, Mr. Myers stated, "This achievement in the face of the many hazardous operations inherent in your normal activities, is particularly noteworthy."

The Manned Spacecraft Center won an Honorable Mention award in the 1969 competition.

ball" size rocks and larger, were opened on February 18 by the Apollo 14 crew under the direction of the Preliminary Examination Team, headed by Anthony J. Calio, Director of Science and Applications, and Dr. Robin Brett.

The largest rock in the bags was one which has been estimated to weigh 20 to 25 pounds. It is the biggest ever brought back from the lunar surface and has been described as about the size of a basketball. The astronauts picked up the rock as they returned to the Lunar Module from the vicinity of Cone Crater.

Dr. Paul Gast, Chief of the Planetary and Earth Sciences Division, comparing the samples

brought back by the Apollo 11 and 12 crews and those returned by the Apollo 14 crew, said that the large rocks picked up by the astronauts of Apollo 14 in the Fra Mauro highland region of the Moon are very different from the large igneous rocks and basalts returned by the crews of Apollo 11 and 12 from mare areas of the Moon.

Fragments in samples from the two earlier mare missions were believed by scientists to have come originally from the highlands into the mare areas. Rocks being examined now seem to confirm that hypothesis, Dr. Gast stated.

## Awards Ceremony

(Continued from Page 1)

so important to the success of Apollo 14 and those whose dedication and leadership were vital in the rescue and safe recovery of the Apollo 13 crew last April.

**NASA Distinguished Service Medal:** Dale D. Myers, Associate Administrator for Manned Space Flight, NASA Headquarters; Walter J. Kapryan, Launch Director, Kennedy Space Center; Sigurd A. Sjoberg, Director of Flight Operations, MSC; James A. McDivitt, Chief, Apollo Spacecraft Program Office, MSC; Eugene F. Kranz, Chief, Flight Control Division, MSC; and Glynn S. Lunney, Chief, Flight Directors Office, MSC.

**NASA Distinguished Public Service Medal:** Grumman Aerospace Corporation.

**NASA Exceptional Service Medal:** Graydon F. Corn, Kennedy Space Center (KSC); Charles D. Gay, KSC; Ralph A. Yoria, KSC; Terry Williams, KSC; Onice M. Hardige, Jr., Marshall (MSFC); H. Fletcher Kurtz, Jr., MSFC; Ellery B. May, Jr., MSFC; Charles H. Meyers, MSFC; Lawrence B. Mulloy, MSFC; and from MSC, Arnold D. Aldrich, Donald D. Arabian, Ronald L. Berry, M. P. Frank, III; John R. Garman, James E.

Hannigan, Caldwell C. Johnson, Jr.; Sidney C. Jones, Jr.; Riley D. McCafferty, Shelby L. Owens, John W. O'Neill, Scott H. Simpkinson, Richard A. Thorson, and Milton L. Windler.

**NASA Public Service Award:** Massachusetts Institute of Technology.

**NASA Group Achievement Award:** Manned Flight Support Network Goddard Space Flight Center, DOD Recovery Forces.

## R & QA Group To Hear Condon

The March 9 meeting of the South Texas Section of the American Society of Quality Control (ASQC) will feature Dr. John E. Condon, Director of the Office of Reliability and Quality Assurance at NASA Headquarters, as guest speaker.

Dr. Condon will speak on the subject "NASA's Reliability and Quality Assurance—A Perspective."

The meeting, to which the public is invited, will be held at the Holiday Inn on NASA Road 1, beginning with a social hour at 6:30 p.m.

Contact Dick Williamson or Tony Kleabonas at 932-4511, x3433 or Jack Cohen at 483-3578 for dinner reservations which must be made by noon on March 8.



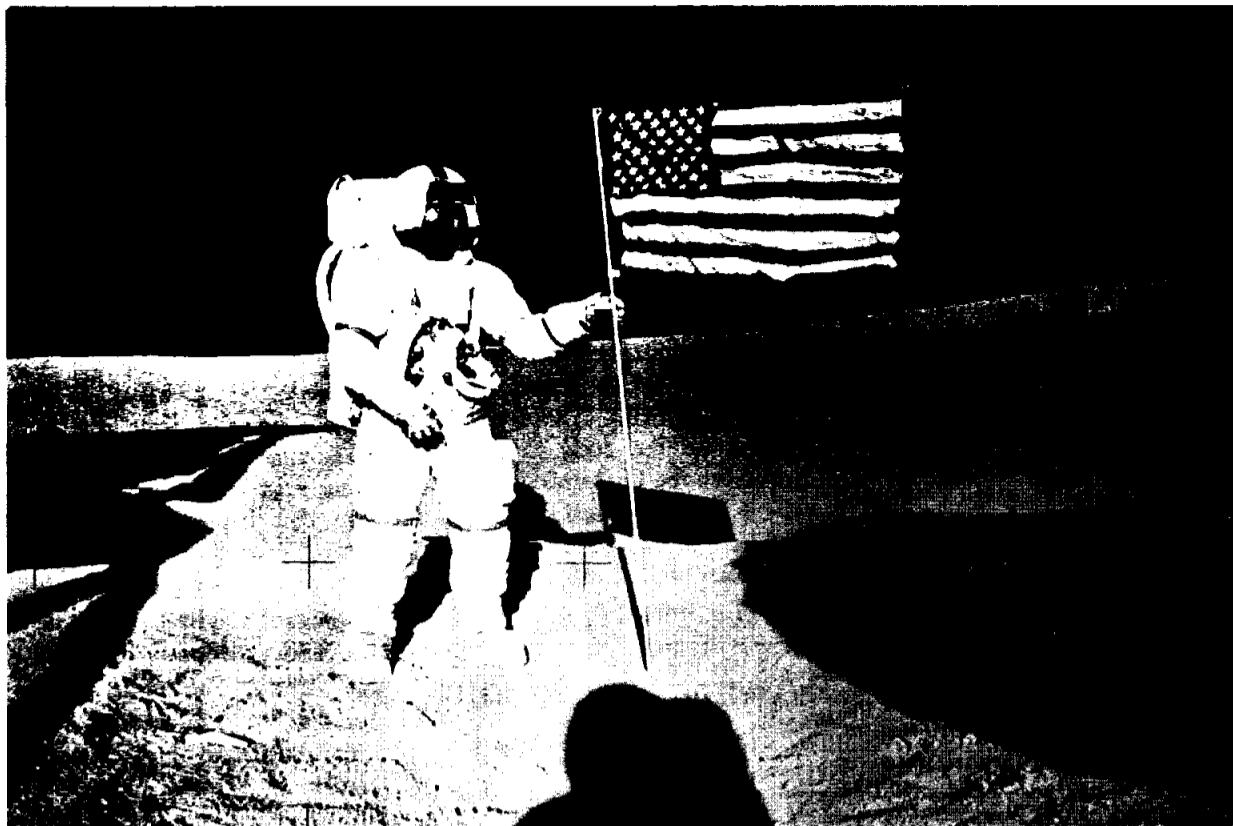
**OPR GIVEN**—Mr. Dee Greenly (left) of the Quality Assurance Division recently received an Outstanding Performance Rating Award. The award was presented by Martin L. Raines, Manager of the Reliability and Quality Assurance Office.

# ROUNDUP

NASA MANNED SPACECRAFT CENTER      HOUSTON, TEXAS

The Roundup is an official publication of the National Aeronautics and Space Administration Manned Spacecraft Center, Houston, Texas, and is published every other Friday by the Public Affairs Office for MSC employees.

# Drama of the Apollo 14 Moon Landing



Beginning in the upper left corner, pictures show Commander Alan B. Shepard, Jr., next to the U.S. flag, and in the second picture, Shepard assembling hand tools as he stands next to the Modularized Equipment Transporter (the "rickshaw"), used for the first time on Apollo 14. The next photo shows an overall view of a boulder field just northwest of the Lunar Module (LM) "Antares," and the following picture is a closeup of a cluster of boulders atop which a hammer and collection bag are visible.



In the photo at top right, LM Pilot Edgar Mitchell moves across the lunar surface with moon dust clinging to his boots and pantlegs. Shepard and Mitchell are next seen setting up the Apollo Lunar Surface Experiments Package (ALSEP), and in the following picture, the completed Central Station of the ALSEP is shown. The final picture shows a lonely "Antares," tracks from the rickshaw leading away from it, as the astronauts began their second lunar walk which would take them close to the rim of Cone Crater in the Fra Mauro region of the Moon.

