

SET FOR THE PICNIC—The dunk tank, one of the more popular attractions at the MSC picnic last year, will be featured again this year at the September 25 event. Pictured above are five MSC belles who have once again volunteered to be dropped into the tank by those MSC and contractor employees with accurate throwing arms. One volunteer, Jamie Flowers, was unavailable at picture-taking time but will be present for the "main event." Clockwise, beginning at 6:00, are Joanne Sanchez, Connye Lenczewski, Mary Yarbrough, June Roach, and Charlotte Ober.

Presidential and OMB directives affect Center

President Nixon's August 15 announcement of the 90-day wage and price freeze and an August 5 announcement by the Office of Management and Budget (OMB) concerning reduction of the government-wide average grade of general schedule (GS) employees have been the subject of much speculation by MSC employees.

The 90-day freeze announce-

ment, which became effective on August 15, includes three provisions already affecting NASA personnel: (1) all promotions are postponed until further notice, (2) there will be no step increases during the 90-day period, and (3) without prior approval by NASA Headquarters, there will be no additions to the Center's staff at the GS-11 level

(See *RECENT*, Page 4)

Supply Van begins appointed rounds

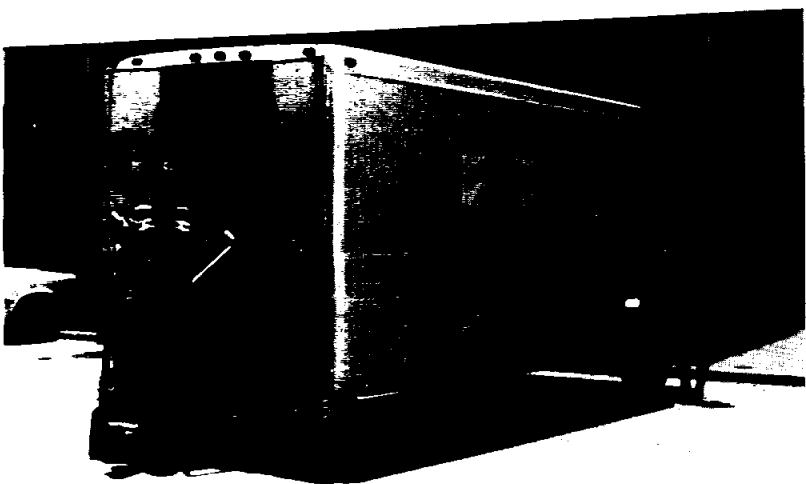
In an effort to reduce the paperwork associated with ordering office supplies, the Logistics Division started service testing a mobile supply-stocked van on August 16.

This pilot program, which will make it easier and faster to get office supplies, represents one of the numerous plans the Center Operations Directorates has for improving customer service.

Under this mobile supply van

concept, a van is visiting various locations on a regularly established schedule. MSC and contractor employees may go through the van selecting the desired items and placing them in grocery type shopping bags. No paperwork is involved, thus making the operation completely customer oriented.

For the initial test, the van is stocked with selected office supplies, such as pens, pencils, paper, (See *NEW*, Page 3)



HAVE SUPPLIES, WILL TRAVEL—The new mobile supply van attracts the attention of three MSC secretaries. Linda Orrick (left) exits, having made her selection. Helen Newton and Mary Duoto pause to smile for the photographer as they prepare to enter the supply wagon.



FALCON ON THE MOON?—No, not quite! Photographer Fred Wrightman of the *Manhattan Mercury*, a newspaper in Manhattan, Kansas, shot this closeup view of the moon through an 800 millimeter lens on Sunday, August 2 while the Apollo 15 Astronauts Dave Scott and Jim Irwin were exploring the lunar surface and Al Worden was circling the moon. Just as Wrightman clicked the camera, a nighthawk, seen in silhouette here, came between the moon and the camera lens. And, indeed, there was a "Falcon"—the Apollo 15 lunar lander—on the moon at that very moment.

Apollo 15 rocks, experiments give new clues to nature of the Moon

Green cheese, no. Green rocks, yes!

Among the samples returned by the Apollo 15 crew are seven or eight rocks which are pale green in color and which, in some cases, contain large green particles. The rocks are being analyzed in MSC's Lunar Receiving Laboratory.

Scientists and principal investigators have been busy here and at research centers studying lunar samples and films brought back by Dave Scott, Al Worden and Jim Irwin and analyzing returns from the experiments left on the moon's surface.

Earlier this week, scientists from Columbia University's Lamont-Doherty Geological Observatory, using thermometers implanted in the lunar surface by Dave Scott and Jim Irwin, successfully measured the temperature gradient beneath the surface—a first step in understanding how the moon produces and gives up its heat.

Measurements from this heat flow experiment show the temperature of material near the lunar surface increases at the rate of about nine degrees Fahrenheit for each ten feet of depth.

The increase of temperature with depth is believed related to the outward flow of heat from a warmer lunar interior.

A 21-pound rock, the largest ever returned from the moon,

was included among the Apollo 15 samples. Also, a fine-grained, grey rock, collected by the astronauts near Spur Crater, has been found to have the lowest potassium level of any lunar sample yet analyzed.

The sample which has received the most publicity is a white anorthositic rock (see picture on page 2). Called by some a "genesis" rock because it may hold clues to the moon's origin, scientists here prefer not to label it as such at this time.

At a press conference recently, Dr. Paul Gast, Chief of the Planetary and Earth Sciences Division, had this to say about the white anorthositic rock.

"If the hypothesis that the moon melted very early in its history or at its inception, in fact, is correct and we find an anorthosite dating back to that time or all anorthosites date back to that time, then that rock should give us the time when

the moon was essentially formed. That's why people imagine it to be very old.

"The simple discovery of this rock on the lunar surface is not a confirmation of (Dr. John) Wood's hypothesis of an early extensive melting of the moon followed by production of the lunar crust. But it certainly is a long step in the direction."

X-ray pictures taken last week of the deep drill core sample showed there to be some 57 undisturbed layers of material and well over 100 small individual (See *ROCK*, Page 4)

Riggan is awarded Degree by U of H

Tony C. Riggan of the Program Procurement Division has received his Master of Arts degree in Public Administration (MPA) from the University of Houston.

He completed the master's program over a four year period while maintaining full-time duties as the Apollo spacesuit contracting officer.

Tony took all of his courses under MSC sponsorship at the Clear Lake Graduate Center. His long range plans include applying for admission to the University of Houston graduate program in political science, leading to a PhD in that field.

CORRECTION: The Outplacement Center, set up to assist employees affected by the reduction in force in finding new jobs, was erroneously listed in the last *Roundup* as being in Building 5. The Center is located in Building 45, Room 556. Appointments for counseling may be made at extension 3486.



"WOW! JUST WHAT I'VE ALWAYS WANTED" may have been Joseph Kreske's words when he opened his retirement gift, a sterling silver Yo-yo. He is retiring at the end of August after over 30 years of government service, the last ten with NASA. Observing his trial-run with the Yo-yo are (l. to r.) Phillip Wesley, Essie Larkin (sitting), Doris Kreske (Joe's wife), Helen Newton, Iva Windham, Glen Keith, and William Parker, Chief of the Logistics Division. The retirement party was given by Joe's friends in the Material Management Branch.

Library Features New Publications

Early this year, NASA and the Department of Transportation under took jointly the study of U.S. Civil aviation and development policy. The results have now been published in a joint report and a volume of supporting papers (DOT TST-10-4, NASA SP-265 and DOT TST-10-5, NASA SP-266).

Some of the subjects considered include the benefits accruing through civil aviation research and development, the problems of noise and air terminal congestion, and the constraints on continuing development.

Analysis of Apollo 10 Photography and Visual Observations (SP-232) was compiled at MSC. Apollo 10 crewmen John Young, Thomas Stafford, and Eugene Cernan recount their observations of the lunar surface from a 60-mile orbit and from an altitude of 50,000 feet above the moon. James Sasser of the Earth Observations Division wrote the introduction to this publication.

Consumer Info to be made available

"The Consumer Product Information Index" will soon find its way into the mailboxes of all MSC employees.

The index, put out by the Consumer Product Information Coordinating Center, lists federal publications of consumer interest and includes instructions for ordering and an order blank.

According to Charles Yacura of the Management Services Division, distribution was made this week.

Other new books available at the Technical Library are *Astronomical Use of Television-type Image Sensors* (SP-256), based on a symposium held at Princeton University; *Models of the Trapped Radiation Environment*, Volume VII (SP-3024); *Biotechnology* (SP-205), based on a conference at Virginia Polytechnic Institute; *Interdisciplinary Approach to the Lubrication of Concentrated Contacts* (SP-237), a symposium held at Rensselaer Polytechnic.

New supply service

(Continued From Page 1)

etc., and other inexpensive, commonly used supply items.

According to Bill Parker, Chief of the Logistics Division, the objective of this pilot program is to achieve maximum efficiency in the issuance of high-volume, low-dollar-value supply items. Parker adds that if the trial program works as anticipated, customer service will be improved by the reduction of delays in distributing supply items and by the elimination of supply requisition forms. In addition to making it easier and faster to obtain supplies, the anticipated savings associated with paperwork reduction will be approximately \$300,000 annually.

A dry run of the schedule, which appeared in MSC Announcement No. 71-115, was conducted on August 11 for the purpose of orienting MSC customers. Employees can assist the pilot program by making prompt selections and departing the van as quickly as possible.

Wanted: Singers

The 90-member Bay Area Chorus invites all interested persons to attend its first fall rehearsal on Sunday, September 12, at the Harris County Recreation Center in Clear Lake Park on NASA Road 1.

Registration will begin at 7:00 p.m. and rehearsals will be held from 7:45 p.m. to 10:00 p.m. There are no tryouts; only steady attendance to insure a good knowledge of the music is required.

The Chorus sings a variety of music, ranging from baroque to contemporary. The Christmas concert, planned for the MSC auditorium on December 12, will include Bach's "Magnificat," accompanied by a small chamber orchestra, and, in a lighter vein, "Now Let Us Sing" by Harry Wilson and "Carol of the Drums" by Katherine Davis.

For more information, call 488-1620, 488-0078, or 471-0691.

The Rover

*The vehicles which carry man
Across creation's widening span
Are embodied in his tireless dreams
To travel far, to where it seems
The promises of his very being
Await the waking of his seeing!*

*O'er endless sands and endless seas
He walks and rides and soars with ease,
On carpets, carts, wagons and wings,
Balloons and sails, and jets of winds;
And now he soars to worlds afar
On plumes of flame to distant stars!*

*Now from the nature of his home
His creations embryo has flown,
A module of its lunar womb,
Unfolding in metallic bloom,
To rove the crevasses and rills,
The mountain valleys and the hills!*

*From this creation his steps in space
Make lunar patterns with a trace
Of paths of progress in his quest,
To learn of how man has been blessed,
With creative power to explore
Each molecule and meteor!*

*Like ancient temperamental steed,
Responding faithfully to need,
With prodding of his gentle hand
It carries him across the land,
To search where never eyes have seen
Or where the steps of man have been!*

*And with its telescopic vision
It watches master in his mission,
With patience of a faithful friend
To wait until his duties end,
In a greater step at the lunar door,
To all the heavens which he will explore!*

—Derek

(published by permission of author, 1971)

Raoul Smith, the author of this poem, is an engineer in the Shuttle Office at Kennedy Space Center. Originally from Appleton, Wisconsin, and a graduate of the University of Wisconsin, Smith has worked for NASA for the past 8 years. He has published a number of well-received poems on space themes over the past several years. "The Rover" was written during a visit to Houston shortly after the Apollo 15 mission.



NASA NIGHT ON THE TOWN—The Holiday Dinner Theater was the scene recently of MSC's fourth successful EAA-sponsored "Night at the Theater." Enjoying the dinner and presentation of "Send Me No Flowers" are (l. to r.) Ann Mechelay and her husband Joe, of the Apollo Test Division; Marta Kranz and husband Gene, Chief of the Flight Control Division; and Leola McBride and her spouse Jim, of Structures and Mechanics Division.

Average Grade by Agency for full-Time General Schedule Employees, June 30, 1971

	1968	1969	1970
General Accounting Office	9.4	9.5	9.6
Library of Congress	7.4	7.6	7.8
Bureau of the Budget (OMB)	11.0	11.1	11.2
Office of Economic Opportunity	8.8	9.2	9.3
State Department, AID and Peace Corps	8.4	8.4	8.3
Treasury Department	7.7	7.9	7.8
Defense Department-Summary	7.2	7.5	7.7
Army	7.1	7.4	7.6
Navy	7.1	7.4	7.7
Air Force	7.3	7.6	7.7
Defense Department-Other	7.8	8.1	8.3
Justice Department	7.9	8.3	7.9
Interior Department	8.2	8.3	8.5
Agriculture Department	7.5	7.7	7.8
Commerce Department	8.7	9.0	9.2
Labor Department	8.8	9.0	9.4
HUD	8.5	9.0	9.0
HEW	6.8	7.1	7.4
Transportation Department	9.7	10.1	10.1
Civil Service Commission	7.0	7.5	7.4
Federal Communications Commission	8.9	9.2	9.2
Federal Home Loan Bank Board	9.7	9.9	9.9
Federal Power Commission	9.8	9.7	10.0
Federal Trade Commission	9.1	9.2	9.1
General Services Administration	6.8	7.0	7.0
U.S. Information Agency	9.1	9.1	9.3
Interstate Commerce Commission	8.9	9.2	9.1
NASA	10.4	10.6	10.8
National Labor Relations Board	9.3	9.8	10.0
Securities and Exchange Commission	9.2	9.5	9.6
Small Business Administration	8.4	8.8	8.9
Smithsonian Institution	7.6	7.8	8.0
Veterans Administration	5.5	5.7	5.8

210 Years of Service



30-year service awards were presented to (Row 1, l. to r.) William J. Nunnery, Management Services; James W. Bailey, Technical Services; Ross F. Jarvis, Engineering Division; (Row 2) Jack A. Kinzler, Technical Services; Homer D. Hill, Engineering Division; Lewis H. Williams, Technical Services; and (Row 3), L. T. Rose, MSC-Downey. Presentations were made here by Associate Director Lt. Gen. Frank A. Bogart and at Downey by F. L. Miller, Acting Resident Manager.

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.

Editorial Staff: Sydni Shollenberger, A. "Pat" Patnesky

Twenty employees earn \$ \$ Awards

Twenty MSC inventors and suggestors recently won awards ranging from \$400 to \$25.

Gareth Nason, Telemetry and Communications Systems Division (TCSD), and Jefferson Lindsey III, formerly of that division, each received \$400 awards.

Their invention, used on the Apollo backpack during lunar EVA's, is a flexible blade antenna. It has small overall dimensions and can be bent for easy storage in confined areas, such as the interior of a spacecraft.

Olin Graham, also of TCSD, was awarded a check for \$200. His invention is a simple, inexpensive color filter mechanism which enables a black and white

TV camera to transmit color image signals.

James Bates of the Science Missions Support Division suggested the addition of street names to the map on the back cover of the MSC phonebook. Phonille DeVore, Personnel Division, suggested placing litter barrels in the areas of the Center frequented by tourists.

Modena Baker and Alice Barker of the Financial Management Division and Dorothy Ludwig of the Management Services Division each entered a suggestion for computerizing operations which have traditionally been done manually.

Other award winners were H. Dean Cubley, TCSD; Richard Johnston, Medical Research and Operations; Herman Sharma, Biomedical Laboratories; William Downs, Structures and Mechanics; Horace Whitacre, Skylab Missions Office; Edwin Shropshire, Harold Siegfried, and Rees Underhill, Technical Services; Eddie Tarkington, David Young, Flight Support; Earl K. Smith, Reliability Division; and Hestle Johnston, Quality Assurance.

Why not submit your idea today? Maybe you'll be the next person selected for an invention or suggestion award.

by, and Paniel Hodgson.

Student ecologists honored by EAF

Fourteen high school students, who chose to spend their summer studying nearby Clear Lake rather than playing in it, were honored earlier this month at a banquet given by the Earth Awareness Foundation (EAF).

Each area of investigation in the attempt to assess the impact of natural and man-caused pollutants in the lake was reported on at the banquet by the principal student investigator.

The students, selected from 50 applicants, attend Clear Creek High School. The Holiday Inn-NASA was the site for the recognition banquet, with awards presented to each participant by former astronaut Walt Cunningham.

The Clear Creek students who took part in the summer study, many of whom are children of MSC and contractor employees, included David Klopfenstein, Linda Ann Betancourt, James Huggins, Jeffrey Rosenberg, Ruthie Melton, Robert Sjoberg, Philip Naecker, Charles Doland, Gregory Lake, Cheryl Murphy, Craig Faupell, John Crane, Thomas Can-

The Foundation was chartered in May 1970 as a non-profit educational and advisory group which hopes to apply space-developed knowledge to the search for solutions to environmental problems.

EAF board members attending the banquet were Dr. Charles Berry, Director of Medical Research and Operations; Eugene Horton, Educational Programs and Services; and Walt Cunningham.

A complete report on the data obtained from the 10-week study will be published in September and distributed to state and federal agencies, the press, and the educational community.



Frank Parmenter makes an adjustment on the rubber-powered model aircraft which he built and flew, as a member of the U.S. team, in international competition.

Parmenter represents U.S. at world Championship model airplane meet

Gothenburg, Sweden, a picturesque town celebrating its 350th anniversary, provided the setting recently for the Model Airplane (Free Flight) World Championship Competition, and Frank Parmenter of the Technical Services Division was there as a member of the United States team.

Frank is not a newcomer to model plane competitions. In fact, this was the third world championship in which he has taken part. The earlier two contests were in Austria and Finland.

The U.S. team was composed of nine flyers and a team manager. To qualify for the team, participants must pay an entry fee and compete in qualifying flights, regional contests, and the U.S. finals.

Sponsored by the Federation Aeronautique Internationale (FAI), which is headquartered in Paris, the world championship this year attracted 230 competitors from 37 nations.

The Academy of Model Aeronautics in Washington, D.C. is an arm of the FAI and manages model plane competition in this country, including the arrangements for U.S. participation in international flying meets.

The world championship competition includes three categories of model aircraft: gas powered, rubber powered, and tow-line glider. All of the models are free flight, i.e., not controlled by radio or wire. Frank took part in the rubber powered plane event, also called the Wakefield Competition. He took four planes with him but flew only one.

Accompanying Frank on this trip was his son Mark, who is 16. Mark has helped his father build and fly models for the past four years. Frank considers the journey to the world championships something of a reward for all of Mark's hard work.

After the competition, the Parmenters spent four weeks touring Scandinavia. Frank, through his model plane activities, has acquired friends around the globe, and the tour of Sweden, Denmark, and Norway provided an opportunity to renew many of those friendships.

Many of the contestants from around the world know of Frank's association with MSC, and as a result, ask him many questions about the space program. These people are, Frank says, very enthusiastic about America's work in space, perhaps even more enthusiastic than many Americans.

World politics does not interfere with the camaraderie which exists among model plane enthusiasts, according to Frank. The spirit of the international contest is one of "friendly competition."

And wouldn't it be nice if all competition everywhere were that way?

NOTICE: A resident of Oakbrook West in Clear Lake City has asked that MSC employees be reminded that Eldorado Boulevard, which at present has no traffic signals, crosswalks, or school crossings, is a necessary crossing point for youngsters going to Clear Lake Elementary School. If you travel on Eldorado in the morning on your way to the Center, please be alert for small children on bikes or on foot.

Recent Directives

(Continued From Page 1)

and above.

MSC's Personnel Officer Jack R. Lister said earlier this week that he has no indication that the suspension of step increases would extend beyond 90-days.

The President's announcement also requires that the Federal Government work force be reduced overall by 5% by the end of FY72.

At this time, there have been no specific instructions from NASA Headquarters as to whether this 5% is in addition to that already experienced by NASA during FY72 or how it would be applied within the Agency. Lister indicated that he believes MSC management will do everything possible to reduce the impact of this further reduction (if required) through attrition.

Additionally, the President has requested that the January 1972 pay raise for Federal employees be postponed for at least 6 months.

The OMB Bulletin (No. 72-4) of August 5 provides for a reduction of the average grade of the general schedule by at least .10 by the end of FY72 and by .20 by the end of FY73.

If an Agency's average grade has increased by .40 or more between June 30, 1968, and June 30, 1971, the Agency must reduce its average grade by .15 in FY72 and .15 in FY73. NASA's average grade has increased by less than .40 in this 3-year period. Hence, there will be a reduction of the average grade within this Agency of only .10 in both FY72 and 73.

Jack Lister stated that as yet there have been no specific guidelines from NASA regarding the average grade reduction. He indicated, however, that if a .1 of 1% reduction is applied at MSC, substantial additional controls on promotions and other personnel actions must be implemented. He stressed that we do not yet know exactly how MSC will be affected and until we receive instructions from NASA Headquarters, no actions will be taken.

Rock Samples

(Continued from page 1)

rocks which can be studied to reconstruct portions of the lunar history contained in the soil. The bottom-most unit in the core section was about three-and-a-half inches thick and was quite coarse, with pebbles up to about one-half inch in diameter.

The net weight of the lunar samples is estimated at 170 pounds. An exact total figure is expected to be announced some time this week.



SUMMER RESEARCHERS—The 32 participants in the NASA/ASEE Summer Faculty Fellowship Program in Research gathered earlier this month for the final presentation on the results of their summer work. The men come from 25 universities in 15 states. The MSC University Affairs Office, represented in the photo by Barbara Eandi (far right), the lone lady in the group, administers the program. Dr. William Graff is coordinator of the program from the University of Houston. The summer fellows worked in the Flight Operations, Science and Applications, Engineering and Development, and Medical Directorates.