

NEWS RELEASE LOG

| NUMBER | TITLE | RELEASE DATE | REMARKS |
|------------------|---|-----------------------|--------------|
| 63-1 | Contract Awarded RCA | January 2 | ✓ |
| 63-2 | United Fund Campaign | January 3 | ✓ |
| 63-3 | Design Study - Data Reduction Complex | January 2 | ✓ |
| 63-4 | Paste for Attaching Electrodes | January 8 | ✓ |
| 63-5 | Lawrence Sperry Award | January 8 | ✓ |
| 63-6 | Elms Address - PGE | January 10 | ✓ |
| 63-7 | Space Contest | January 10 | ✓ |
| 63-8 | Mercury Display | January 14 | ✓ |
| 63-9 | IRE Award - F. Bailey | January 24 | ✓ |
| 63-10 | Training of Astronaut Candidates | January 26 | ✓ |
| 63-11 | Apollo Contracts | No date | ✓ |
| 63-12 | Gemini Management Agreement | January 22 | ✓ |
| 63-13 | Astronaut Assignments | January 26 | ✓ |
| 63-14 | Mission Control Center | January 28 | Headquarters |
| 63-14 | Grumman Release | January 30 | ✓ |
| 63-15 | LEM Contract to Grumman | January 31 | ✓ |
| 63-16 | Foreign Consuls Visit MSC | February 1 | ✓ |
| 63-P17 | Purser w/British Consul | February 1 | ✓ |
| 63-18 | Raytheon Contract | February 11 | ✓ |
| 63-19 | Summer Intern Program | February 5 | ✓ |
| 63-20 | MA-9 Delay | February 5 | ✓ |
| 63-21 | Gilruth as Visiting Professor-Texas A&M | February 8 JUL 2 1979 | ✓ |
| 63-22 | Congressional Committee Visits MSC | February 8 | ✓ |
| 63-23P | Astronauts Study Orbital Mechanics | February 11 | ✓ |

NEWS RELEASE LOG

| NUMBER | TITLE | RELEASE DATE | REMARKS |
|--------|---|--------------|--------------|
| 63-24 | Crawler Transport Contract | February 11 | ✓ |
| 63-25 | Gemini Chute Tests | February 11 | ✓ |
| 63-26 | MA-9 Delay | February 12 | ✓ |
| 63-27 | Reorganization of Apollo Office | February 13 | |
| 63-28 | Rotating Space Station | | Killed |
| 63-29P | Homer Newell Lectures | | ✓ |
| 63-30 | U. S. Orbital Flight Anniversary | February 20 | ✓ |
| 63-31 | Little Joe Contract | February 20 | ✓ |
| 63-32 | Fire Prevention Contract | February 20 | ✓ |
| 63-33P | Space Station | | Killed |
| 63-34P | Al White Lectures | | ✓ |
| 63-35 | Dr. Billingham comes on-board | February 26 | ✓ |
| 63-36P | Dr. Billingham portrait | February 26 | ✓ |
| 63-37P | Astronauts in Apollo Command Module | March 12 | ✓ |
| 63-38 | MSC Acquires Test Vessel | March 4 | |
| 63-39 | School has Space Speaker - Jack Pound | March 3 | ✓ |
| 63-40P | Astronaut Photo - All 16 | | ✓ |
| 63-41 | PTA to Hear Space Official - Jack Cairl | | ✓ |
| 63-42 | | | ✓ |
| 63-43 | Space Official to Speak - Jack Lister | March 4 | ✓ |
| 63-44P | Cub Scouts | March 4 | ✓ |
| 63-45 | Facility Support Contract Negotiated | March 5 | ✓ |
| 3-46 | Huntsville Prison Release | | Request Only |
| 63-47P | Glenn RELAY Photo | March 8 | ✓ |

NEWS RELEASE LOG

| NUMBER | TITLE | RELEASE DATE | REMARKS |
|--------|--|--------------|---------|
| 63-48P | Kratovil is New MSC Finance Officer | March 11 | ✓ |
| 63-49 | LEM Contract | March 11 | ✓ |
| 63-50 | Foster to Speak at A&M | March 15 | ✓ |
| 63-51P | Space Science Workshop | March 15 | ✓ |
| 63-52 | LASER | March 20 | ✓ |
| 63-53P | LASER Photo | March 20 | ✓ |
| 63-54 | Goddard Trophy Awarded to Glenn | March 20 | ✓ |
| 63-55 | MSC Weather Advisory Group | March 21 | ✓ |
| 63-56 | Space Foods | March 22 | ✓ |
| 63-57P | Integrated Mission Control Center | March 20 | ✓ |
| 63-58 | Correales Crash Helmet | March 20 | ✓ |
| 63-59P | Display at World Trade Center | March 20 | ✓ |
| 63-60 | Personnel Changes - Chamberlin & Mathews | March 19 | ✓ |
| 63-61 | ECS - AiResearch | March 26 | ✓ |
| 63-62 | Hayes Graphic Arts Contract | March 22 | ✓ |
| 63-63 | Space Suit Performance | March 27 | ✓ |
| 63-64P | Space Suit Photo | March 27 | ✓ |
| 63-65 | Spacecraft ECS | | ✓ |
| 63-66 | Philco Contract - IMCC | March 27 | ✓ |
| 63-67 | Ballute | April 4 | ✓ |
| 63-68 | Space Contest | March 29 | ✓ |
| 63-69 | MSC Exhibit in Trade Center | March 31 | ✓ |
| 63-70 | Dr. Berry to Speak in New York | April 2-3 | ✓ |
| 63-71 | Gemini Contract with McDonnell | April 2 | ✓ |
| | | | |

NEWS RELEASE LOG

| NUMBER | TITLE | RELEASE DATE | REMARKS |
|--------|--|--------------|---------|
| 63-72 | Frick Resigns | April 4 | ✓ |
| 63-73 | Contract to Graham for Facilities | April 5 | ✓ |
| 63-74 | Engineers to AGARD | April 10 | ✓ |
| 63-75 | Joe Doke to speak to Kiwanis | April 10 | ✓ |
| 63-76 | Dr. White is Reassigned | April 12 | ✓ |
| 63-77 | Houston's World Trade Center | April 19 | ✓ |
| 63-78 | Gemini Wiring w/photo | April 25 | ✓ |
| 63-78A | Physical effects operations of Clear Lake | | |
| 63-79 | Apollo Mission Trainers | April 30 | ✓ |
| 63-80 | Glenn to Japan | | |
| 63-81 | LEM Systems Simulation | | |
| 63-82 | Crews Systems Division Hardware Dev. | May 2 | ✓ |
| 63-83 | Joe Doke Feature | May 3 | ✓ |
| 63-84 | Elms to Speak in Chicago | May 3 | ✓ |
| 63-85 | Drop test of Proj. Apollo earth landing system | May 3 | |
| 63-86 | Gemini spacecraft water landing | May 7 | |
| 63-87 | Technical Svcs Cont. to Lockheed | May 9 | KILLED |
| 63-88 | Specific Division of Management Responsibilities | May 10 | |
| 63-89 | MA-9 Advisory | May 13 | |
| 63-90 | Aeromedical Recorders | May 15 | |
| 63-91 | Westinghouse Contract Award | May 28 | |
| 63-92 | LEM Descent Engine Award to STL | May 29 | |
| 63-93 | Electrical Amplifier in "Faith 7" | May 28 | |
| 63-94 | Realignment of Hjerneviks Administration | No date | |
| 63-95 | 15 new astronaut Trainees to be Selected | June 5, 1968 | |

NEWS RELEASE LOG

| NUMBER | TITLE | RELEASE DATE | REMARKS |
|--------|--|---------------|---------|
| 63-96 | Astronaut's Jungle Training | June 6, 1963 | |
| 63-97 | Printing and Reproduction Contract | June 10, 1963 | |
| 63-98 | Martian "Taxi" | June 12, 1963 | |
| 63-99 | Peterson as Speaker in Norman, Oklahoma | June 10, 1963 | |
| 63-100 | Hamilton Std. Environmental Control Cont. | June 12, 1963 | |
| 63-101 | Gilruth's Comments on Holmes Resignation | June 12, 1963 | |
| 63-102 | MSC's Effort to Find New Astronauts | June 18, 1963 | |
| 63-103 | MSC's Hiring of 190 Temporary Students | June 18, 1963 | |
| 63-104 | B. Thompson as Speaker in Mississippi | June 19, 1963 | |
| 63-105 | Management Intern Program | June 20, 1963 | |
| 63-106 | Owen Maynard Feature Biography | June 22, 1963 | |
| 63-107 | Gemini systems Trainers | June 26, 1963 | |
| 63-108 | Frictionless Platform | June 26, 1963 | |
| 63-109 | John Stonesifer Feature | July 3, 1963 | |
| 63-110 | Astronaut Space Suit Tests | July 5, 1963 | |
| 63-111 | Gemini Ejection Seat Tests on Rocket Sled | July 3, 1963 | |
| 63-112 | Brinkman, Edmonds & Holland to Photo Conv. | July 6, 1963 | |
| 63-113 | Solar Eclipse | July 14, 1963 | |
| 63-114 | Second Industry Aerospace Symposium | July 14, 1963 | |
| 63-115 | Little Joe II Launch Vehicle | July 16, 1963 | |
| 63-116 | Dick Johnston's new Assignment | July 16, 1963 | |
| 63-117 | Professional Photo Exhibit in Dallas | July 16, 1963 | |
| 63-118 | Maj. Gen. O. K. Neiss new assignment | July 16, 1963 | |
| 63-119 | Radnofsky & Shewmake Life Raft Award | July 22, 1963 | |

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
MANNED SPACECRAFT CENTER
HOUSTON 1, TEXAS

RELEASE: IMMEDIATE

msc 63-1

CONTRACT AWARDED TO RCA SERVICES COMPANY

A \$3,690,000 contract to create the sun's intensity in space environmental chambers was awarded to RCA Services Company, Camden, New Jersey, officials of the NASA Manned Spacecraft Center announced today.

One sun intensity in outer space will be simulated by electric carbon arc lamps projecting through a system of self-contained mirrors and lenses along the top and side of two conical chambers. The "suns" will be used to measure solar radiation effects on man, vehicle, suits, and various materials to be launched into space.

Largest of its type, the "A" chamber will measure 120 feet high and 85 feet in diameter. It will house the APOLLO vehicle, consisting of command, service and lunar excursion modules. The smaller "B" chamber, measuring 85 feet high and 65 feet in diameter, will house the APOLLO command module and will provide the space environment for training astronauts. Both chambers will be constructed in late 1964 at the Clear Lake site for NASA's Manned Spacecraft Center in Houston.

* * * * *

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
MANNED SPACECRAFT CENTER
HOUSTON 1, TEXAS

MSC 63-2

FOR RELEASE: Immediate

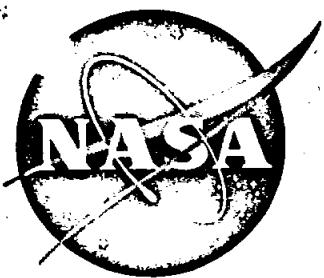
Manned Spacecraft Center employees donated \$23,721 to the Houston and Harris County United Fund campaign, bringing their contributions to 167 percent of the original quota.

One thousand, four hundred and sixty-nine (1,469) NASA employees participated in the drive, averaging a contribution of \$16.15.

Don Gregory, Technical Assistant to Manned Spacecraft Center's Director Dr. Robert R. Gilruth, said, "...going over our quota by 67 percent marks the highest participation by MSC's employees to a charity drive."

The quota was originally set for \$14,214.

###



NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
MANNED SPACECRAFT CENTER
HOUSTON 1, TEXAS

FOR RELEASE: IMMEDIATE

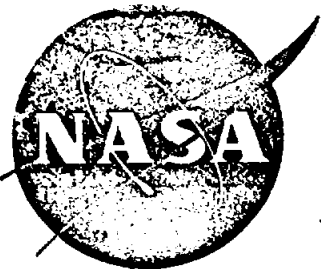
MSC 63-3

HOUSTON, Texas - Requests for a design study of an electronic equipment complex to reduce space flight and test information in Manned Spacecraft Center's completely automatic data reduction facility at Clear Lake were made by NASA officials.

The facility will handle large data reduction problems resulting from Gemini and Apollo flights, from space environmental tests, astronaut training devices (centrifuge), and other equipment tests.

Copies of the request "Study Design of Optimum Data Reduction Equipment Complex" are available for reference in the Control Systems Procurement Office, NASA Western Operations Office, and NASA Headquarters.

###



NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
MANNED SPACECRAFT CENTER
HOUSTON 1, TEXAS

FOR RELEASE: IMMEDIATE - January 8, 1963

MSC 63-4

The Manned Spacecraft Center is investigating the development of a better "paste" for attaching electrodes to the skin of orbiting astronauts.

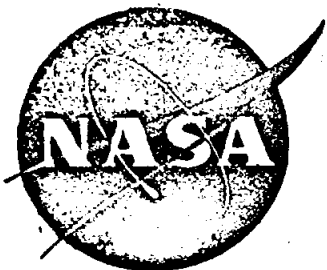
Not the kindergarten variety, the special conducting paste is used as a medium through which electrical impulses relay the astronaut's physical condition to a medical observer on the ground.

On Mercury flights, electrodes were used to measure heart and respiration rates of the astronaut in space. Flights of longer duration, such as Gemini and Apollo, will require an electrode conducting paste which will not irritate the skin, and which will not lose any of its stability, or conducting ability during missions lasting several weeks.

Baylor University's College of Medicine, under contract to the Manned Spacecraft Center, is presently conducting research in long term electrodes. Some ideas pursued are dry electrodes, as well as improved pastes.

Although medical observers are monitoring heart and respiration rates only with electrodes on Mercury flights, development of a better electrode technique may yield other biomedical responses such as: galvanic skin responses, muscle responses, brain alertness, and eye motions to detect zero-G effects.

####



NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
MANNED SPACECRAFT CENTER
HOUSTON 1, TEXAS

FOR RELEASE: IMMEDIATE - January 8, 1962

MSC 63-5

A Manned Spacecraft Center employee has been named for the 1962 Lawrence Sperry award "for notable contributions made by a young man to the advancement of the aerospace sciences."

Robert O. Piland, 35, Deputy Manager of the Apollo Project Office, was selected by the Institute of Aerospace Sciences for his "significant contribution to the early planning and concepts for the manned lunar flight program."

The award, consisting of a certificate and \$250, is presented annually in honor of Lawrence Sperry, who was responsible for the early development of automatic control of the first guided missile.

Piland will receive the award during the IAS Honors Night dinner at the Hotel Astor in New York on January 22.

####

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
MANNED SPACECRAFT CENTER
HOUSTON 1, TEXAS**

MSC 63-6

FOR RELEASE: IMMEDIATE

A top Manned Spacecraft Center official will address the newly established Houston Chapter of the Professional Group for Engineering Management (PGEM) of the Institute of Radio Engineers.

James C. Elias, Deputy Director for Development and Programs, will speak on "Management Requirements for a Large National Program".

The meeting of the professional group will be held in the Houston Engineering and Scientific Society building at 8 p.m. on January 31.



NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
MANNED SPACECRAFT CENTER
HOUSTON 1, TEXAS

MSC 63-7

IN REPLY REFER TO:

HOUSTON - A space-oriented contest for the best technical and editorial papers written by junior and senior high school students in Houston and Harris county is being sponsored by NASA's Manned Spacecraft Center.

Four technical papers of 1500 words on space sciences or manned space exploration, and four editorial papers of 1000 words on the theme, "Why are we going to the moon?" will be selected.

Eight final winners -- four each from junior and senior high schools, will be announced on March 31 during the annual Science Seminar at San Jacinto high school. Winners will receive a certificate, plaque, and pin, and will meet one of the astronauts in a special tour and briefing at the Manned Spacecraft Center.

The contest is open to all junior and senior high school students in Houston and the independent school districts in Harris county. Students can enter either the editorial or technical paper event. Deadline for all entries is February 25.

Preliminary judging will be conducted by english and science teachers at each school. A committee of judges, composed of members of the professional, scientific and educational community, will decide the final winners.

###

The Secretary of Defense, Mr. McNamara, and the Administrator of NASA, Mr. Webb, announced today a new agreement to provide the most effective utilization of the Gemini project, an experimental program to advance the technology of manned space flight, including rendezvous and docking, and to study the effects of weightlessness for periods up to two weeks. The new agreement establishes a Gemini Program Planning Board. Dr. Robert C. Seamans, Jr., Associate Administrator of the NASA, and Dr. Brockway McMillan, Assistant Secretary of the Air Force for Research and Development, are appointed co-chairmen. This agreement supplements the NASA/USAF Gemini Management agreement that has been in effect since the spring of 1962. NASA will continue to be responsible for managing the Gemini project,

The Planning Board will delineate NASA and DOD scientific and technological requirements and monitor the Gemini program to insure that experiments are planned and the results of experiments are analyzed and disseminated to insure maximum benefits to both the NASA and the Department of Defense. It is expected that the DOD will furnish fund support to assist in the attainment of Gemini objectives. The amount of such support will be determined on the basis of recommendations submitted by the Board.

Mr. Webb and Mr. McNamara join in stressing the national character and importance of the Gemini project. "It represents a great national resource," they said. "We are determined to insure that it is utilized

in the national interest, and to avoid unnecessary duplication of effort in this area as in all others." The agreement between NASA and the DOD on the management of the Atlantic Missile Range and earlier agreements on the X-15 aircraft and the National Launch Vehicle Program were cited as additional examples of similar

MSC 63-8

TO MINNEAPOLIS, MINNESOTA NEWSPAPERS

The Manned Spacecraft Center of the National Aeronautics and Space Administration will exhibit a Mercury spacecraft, ~~spacecraft~~ and pressure suit, along with other displays, in Minneapolis for one week beginning January 20.

The Mercury spacecraft will be shown in the Minneapolis Municipal Hall the entire week. The Mercury pressure suit, a career opportunity panel, and another exhibit will be at the University of Minnesota on January 21 and 22.

#

NEWS EDITOR
MINNEAPOLIS STAR

NEWS ED
MINNEAPOLIS TRIBUNE

ONE EACH AT:

427 PORTLAND AVE, S.
MINNEAPOLIS, MINN

120 E. Lansing, Michigan newspapers

The Manned Spacecraft Center of the National Aeronautics and Space Administration will exhibit a Mercury spacecraft and pressure suit, and a career opportunity ~~panel~~ exhibit at the ^{MICHIGAN STATE} University of Michigan on January 28-31 in East Lansing, Michigan.



NEWS EDITOR
~~THE~~ LANSING STATE JOURNAL
120 E. LENAUEE
LANSING, MICH.

NEWS ED
MICHIGAN STATE NEWS
MICHIGAN STATE UNIVERSITY
E. LANSING, MICH.

o Houston newspapers

The Manned Spacecraft Center of the National
Aeronautics and Space Administration will ~~display~~
in the Houston Boat Show on January 18-22 with several space
exhibits.

Shown to ~~boating~~ boating enthusiasts will
be a Mercury flight path panel, ~~Commander's~~
~~Survival~~ Astronaut Scott Carpenter's survival equipment

The Manned Spacecraft Center of the National
Aeronautics and Space Administration will display several
space exhibits during the Houston Boat Show on January 18-22.

Boating enthusiasts will also see a ~~Mercury~~
Mercury flight path panel, Astronaut Scott Carpenter's survival
equipment, models of NASA projects and a film ~~strip~~
X X

#

NEWS EDITOR
- HOUSTON CHRONICLE
512-24 TRAVIS ST;

NEWS ED.
- HOUSTON PRESS
RUSK AND CHARTRES STS.

NEWS ED.
- HOUSTON POST
POLK AVE AND DOWLING ST.

Yuma, Arizona newspapers

The Manned Spacecraft Center of the National Aeronautics and Space Administration will participate in Yuma's airport dedication with a special space exhibit.

A Mercury spacecraft, a rocket motor complex exhibit and other displays will be ~~available~~ for airport visitors on January 26 and 27.

A Mercury spacecraft, a rocket motor, ~~complex~~ and other exhibits will be displayed to airport visitors on January 26-27.

#

NEWS EDITOR
YUMA SUN AND ARIZONA SENTINEL
YUMA, ARIZ.

YUMA SUN
YUMA, ARIZONA

exhibits

mercier

to Galveston newspapers*

The Manned Spacecraft Center of the National Aeronautics and Space Administration will display several space exhibits during the January 17-19 meeting of the Texas Society of Professional Engineers in Galveston.

On display will be the Big Joe capsule, ~~an Apollo~~ ~~and~~ Apollo and Gemini projects panel, and other ~~and~~ NASA exhibits.

#

NEWS EDITOR

* GALVESTON NEWS

GALVESTON TRIBUNE

~~NEWS EDITOR~~

SEND COPY TO EACH AT SAME ADDRESS

NEWS PUBLISHING CO., INC.
NEWS-TRIBUNE BLDG.
GALVESTON



NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
MANNED SPACECRAFT CENTER
HOUSTON 1, TEXAS

FOR RELEASE: HOLD FOR AM JANUARY 24, 1963

MSC 63-9

The Manned Spacecraft Center team responsible for Project Mercury's reliability was honored last night when the Institute of Radio Engineers (IRE) Professional Group of Reliability and Quality Control presented its 1962 award.

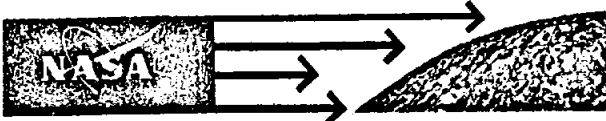
Frederick J. Bailey, Jr., Chief of MSC's Office of Reliability and Flight Safety, accepted the award on behalf of the Mercury team.

The award presentation, a highlight of the IRE group's Ninth National Symposium banquet in San Francisco, was made by PGRQC Chairman L. J. Paddison.

In accepting the award, Mr. Bailey said, " reliability and safety in this program has been the result of meticulous attention to detail by thousands of dedicated people inspired by pride in their ability to contribute something of value and expecting no reward beyond the deep personal satisfaction that comes from doing one's part to the best of one's ability."

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
MANNED SPACECRAFT CENTER Houston
1, Texas



63-10

IMMEDIATE

TRAINING OF ASTRONAUT-CANDIDATES

Outside of Flagstaff, Arizona, nine young men and a "moon" expert inspect a meteor crater.

The men are NASA aerospace pilots and engineers, or astronaut candidates. On this trip the men will also inspect lava flows, and at midnight, they will have a close look at the moon through an observatory telescope.

It is conceivable that one of these men will be the first man on the moon, and so he is being taught how to "see" through an astronomer's eyes, how to collect geological samples as he will do on the moon's surface, and how to evaluate quickly what to take back with him to Earth -- to eager scientists back home.

Selenology, or the geology of the moon, is taught to the astronaut-candidates by Dr. Eugene Shoemaker, of the U. S. Geological Survey, one of the many experts supplying knowledge through "know-how" courses set up as part of training for the new astronaut-selectees.

Areas covered are astronomy, rocket propulsion systems, flight mechanics, computers, guidance and navigation, aerodynamics, communications, physics of the atmosphere and space, environmental control systems, medical aspects of space flight, global meteorology and selenology. These classroom courses are taught by Manned Spacecraft Center and NASA personnel, and experts in their fields from educational institutions and industry.

Responsible for astronaut training activities is MSC's Raymond G. Zedekar, who, under Flight Crew Operations Chief Warren North, sets up the academic sessions, the field trips, and operational training activities.

"The classroom courses will be completed in early February," Zedekar said, "and shortly thereafter, beginning with Dr. Homer Newell, Director of NASA's Space Science program, as first speaker, we will begin a series of science seminars."

Seminars on a one-a-week schedule will introduce top science personalities such as Dr. James A. Van Allen, discoverer of the globe-girdling radiation belts, to the nine astronaut-candidates. Designed to keep the aerospace pilots abreast of U. S. scientific space projects and technology, the science seminars are primarily intended to mesh technical engineering thinking into scientific gear.

"We hope to highly educate the aerospace pilot-engineers to do scientific tasks, to be able to communicate with PhD scientists in every field," North described. "The pilots were selected for their potential to keep up with and to become scientists. We hope to augment their technical backgrounds with broad scientific background."

Exposure to scientific details of the deep space and satellite programs, such as Ranger, Prospector, Surveyor; the X-15; the Air Force's DYNA-SOAR program;

-more-

status of the nuclear, ion, rocket engine technology, and large liquid and solid rocket development, exemplifies the weekly seminar fare.

Another training phase is adjusting to environmental conditions, or operational training. Here, survival training, pressure suit indoctrination, simulation of launch and reentry gravity ("g") forces through centrifuge tests, and weightlessness aboard a specially equipped KC-135 which flies certain maneuvers to achieve moments of weightlessness for personnel on board, are introduced. Included is the technique of parachute jumping, although the new candidates will not actually make any training jumps from aircraft.

Scheduled around the science seminars are briefings on spacecraft and launch vehicle design and development, and trips to contractor sites whenever possible.

Each new candidate and astronaut is assigned a particular area of responsibility for the Gemini and Apollo projects, which enables him to cover an important phase of the program in more detailed manner. Areas, such as guidance, navigation, booster development, recovery, etc., will be monitored personally by each man to contribute his learnings in the state-of-the-art to the overall training picture.

New trainers encompassing dynamic training are scheduled into the program as they become available. At Edwards Flight Research Center, California, the in-flight paraglider trainer for Gemini's controlled return to an earth landing at a pre-selected point, will be flown by astronauts and trainees. The glider is wed by helicopter to an altitude of 5,000 feet, released, and by control of snroud lines (cables), is flown back to a controlled 45 mph skid landing.

A "free flight lunar lander", another dynamic training device, will simulate landing sensations on the moon through control of thrust from a turbojet engine. By removing 5/6 of earth's gravity pull, leaving 1/6 - the gravity pull of the moon - trainees can practice hovering and other maneuvers to develop techniques for landing in a lunar environment.

Dynamic phase of operational training also includes proficiency flights in AF aircraft assigned to NASA. The pilots are currently flying T-33 and F-102-type airplanes out of Ellington AFB.

Static trainers are being developed for use by astronauts and candidates in the near future. The first systems trainers for Gemini, arriving soon, will display the capsule's complete electrical system, and electrical power input, the propulsion system, or another phase of the spacecraft systems operation. A later arrival, the full-scale two-man Gemini trainer, also called mission simulator, will produce flight conditions programmed into the trainer by computers, duplicating the Gemini capsule in every detail. The pilot will make "dry" runs of his flight plan in the Gemini trainer.

#####

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
MANNED SPACECRAFT CENTER  Houston
1, Texas

IMMEDIATE

63-11

Two major contracts for the lunar-bound Apollo project, totaling \$254,966.00, were awarded recently by NASA's Manned Spacecraft Center in Houston, Texas.

A fixed price of \$165,000.00 for a lunar charting service went to the United States Air Force Aeronautical Chart and Information Center, in St. Louis, Missouri.

Chance Vought Astronautics Division of Ling-Temco-Vought, Inc., of Dallas, Texas, received \$89,966.00 to present an exploratory study of guidance system techniques in emergency abort operation of the Apollo lunar excursion module (LEM) during lunar landings.

###

MSC 63-12

NEWS RELEASE - To be released today (1/22/63) at noon by the DOD

(Called in by Mr. Low)

The Secretary of Defense, Mr. McNamara, and the Administrator of NASA, Mr. Webb, announced today a new agreement to provide the most effective utilization of the Gemini project, an experimental program to advance the technology of manned space flight, including rendezvous and docking, and to study the effects of weightlessness for periods up to two weeks. The new agreement establishes a Gemini Program Planning Board. Dr. Robert C. Seamans, Jr., Associate Administrator of the NASA, and Dr. Brockway McMillan, Assistant Secretary of the Air Force for Research and Development, are appointed co-chairmen. This agreement supplements the NASA/USAF Gemini management agreement that has been in effect since the spring of 1962. NASA will continue to be responsible for managing the Gemini project.

The Planning Board will delineate NASA and DOD scientific and technological requirements and monitor the Gemini program to insure that experiments are planned and the results of experiments are analyzed and disseminated to insure maximum benefits to both the NASA and the Department of Defense. It is expected that the DOD will furnish fund support to assist in the attainment of Gemini objectives. The amount of such support will be determined on the basis of recommendations submitted by the Board.

NEWS RELEASE

1/22/63

Mr. Webb and Mr. McNamara join in stressing the national character and importance of the Gemini project. "It represents a great national resource," they said. "We are determined to insure that it is utilized in the national interest, and to avoid unnecessary duplication of effort in this area as in all others." The agreement between NASA and the DOD on the management of the Atlantic Missile Range and earlier agreements on the X-15 aircraft and the National Launch Vehicle Program were cited as additional examples of similar inter-agency cooperation.

~~ALLS~~
~~END~~

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
MANNED SPACECRAFT CENTER  Houston
1, Texas

Walnut 8-2811 - Extension 3751

~~63-13~~
MSC 63-13

IMMEDIATE RELEASE: JANUARY 26, 1963

The latest assignments in various areas of specialization for the flight crew personnel of the Manned Spacecraft Center were announced today by Dr. Robert R. Gilruth, Center Director.

The assignments are designed to insure pilot input into the design and development of spacecraft and flight-control systems and to provide part of the broad training which the pilots will undergo.

Major Donald K. Slayton, one of the original seven astronauts, who was named last September as Coordinator for Astronaut Activities for MSC, will maintain overall supervision of astronaut duties.

The current assignments of the other six original astronauts will be:

Major L. Gordon Cooper, Jr., MA-9 pilot, and Commander Alan B. Shepard, Jr., MA-9 back-up pilot, are responsible for the pilot phases of Project Mercury.

Major Virgil I. "Gus" Grissom's particular area will be Project Gemini.

Lt. Col. John H. Glenn will concentrate on Project Apollo.

- more -

Lt. Commander M. Scott Carpenter's duties will cover the lunar excursion training.

The remaining responsibility areas, to be handled by nine new flight-crew personnel, are designed to provide for pilot input "across the board," covering the major manned space projects, as well as operations and training, to assure thorough consideration of pilot requirements and to provide training in all parts of the development.

The various specialty areas are:

Trainers and simulators - Neil A. Armstrong will monitor the development, design and use of trainers and simulators, including new training requirements not associated with specific mission simulators.

Boosters - Major Frank Borman will concentrate on the booster design and development program, especially booster-abort systems and development of abort-preventing procedures for mission success.

Cockpit layout and systems integration - Lt. Charles Conrad, Jr., will specialize in cockpit layouts, instrument displays and pilot controls to insure that systems "displays" are appropriately integrated into cockpit panels.

Recovery systems - Lt. Commander James A. Lovell, Jr., will monitor design and development of all recovery systems, such as paraglider, parachute, and LEM landing system, including resolving operational problems in the reentry and recovery part of the mission.

Guidance and navigation - Captain James A. McDivitt will specialize in design and development of guidance and navigation systems and aids for operational requirements.

Electrical, sequential, and mission planning - Elliott M. See, Jr., will monitor the design and development of electrical and sequential systems. In addition, he will aid in the coordination for mission planning.

Communications, instrumentation and range integration - Captain Thomas E. Stafford will monitor the design and development of communications and instrumentation systems, insuring that onboard systems are compatible with pilot needs and properly integrated with the IMCC (Integrated Mission Control System), GOSS (Ground Operational Support System) and other communication links.

Flight control systems - Edward H. White II will monitor the design and development of flight control systems and related equipment.

Environmental control systems, personal and survival equipment - Lt. Commander John W. Young will monitor design and development of environmental control systems, survival gear, pressure suits, couches, and other personal equipment.

The astronauts will attend all major meetings and conferences on design and mock-up reviews, and staff meetings, and have the option to request any specialist from other areas for consultation.

Specialty assignments given to individual astronauts will change somewhat during the training program as required. These assignments do not imply crew selection for future manned space missions. Mission crews will be selected prior to each flight.

* * * * *

NEWS RELEASE NO. 63-14
NASA HEADQUARTERS
WASHINGTON, D.C.
JANUARY 28, 1963 4:00 P.M.

(Taken by telephone by Wilma Wells)

PHILCO TO DEVELOP MANNED FLIGHT MISSION CONTROL CENTER AT HOUSTON

National Aeronautics and Space Administration to negotiate with the Philco Corporation for a contract to develop and equip the Manned Flight Mission Control Center at NASA's Manned Spacecraft Center at Houston, Texas.

Gemini rendezvous and Apollo flights will be directed by the new mission control center just as Project Mercury's flights have been run by the Mercury Control Center at Cape Canaveral, Florida. Until the new center goes into operation in mid 1964, early Gemini flights will be conducted from the Mercury Control Center. However, the Mercury center is not designed to handle the later manned complex Gemini missions involving rendezvous, nor any of the Apollo missions. The mission control center will be the complex focal point for the entire ground operational support system. From it the manned spacecraft themselves, and the network of world wide tracking stations, will be directed.

The center will consist of several major electronic subsystems -- communications, displays, simulation and training, and computers. Philco would design and develop much of this equipment and tie the entire complex together into a highly integrated operational system.

The new control center, containing two mission control rooms, will be housed in a 200 foot square three-story building, the foundation of which is now under construction.

The computer complex and communications center will be on the first floor. Identical mission control rooms will be on the second and third floors. Two mission control rooms are required because of the detailed control preparations that will go into Gemini and Apollo missions, frequency and length of the missions, and the extensive training programs that are essential to mission success.

Fewer than twenty controllers will be in the mission control room during a flight, but upward of 250 technical and administrative people will be involved in carrying on supporting functions in adjacent rooms. These include recovery control, recovery communications, meteorology, trajectory data, network support, simulation equipment and monitor devices for life support and vehicle systems.

Computer driven data displays, providing vast quantities of a real-time data which can be plotted and presented literally thousands of ways, will be employed in the mission control center. The displays will utilize television and back lighted projection techniques extensively.

Estimated cost of Philco's effort is \$30 million. This amount excludes the computer complex, but includes some \$18 million worth of

other electronic equipment to be installed and one year of maintenance and operation following completion of the center. The computer complex will be provided by International Business Machines Corp. under a separate contract (see NASA 62-221, October 16, 1962); total cost of the mission control center is expected to exceed \$50 million. Philco's Western Development Laboratory at Palo Alto, California was one of several companies competing for the contract.

JANUARY 30, 1963

MSC 63-14

The Grumman Aircraft Engineering Corp. announced today that with approval of the NASA Manned Spacecraft Center, Houston, Texas, the following firms have been selected for pre-negotiation discussions of the Project Apollo lunar excursion module propulsion, reaction control and environmental control systems:

Rocketdyne Division of NAA, Inc., Canoga Park, California, for throttlable engine using a gas injection scheme for control of the LEM during descent to the lunar surface. A parallel descent-engine development program will be conducted with another (yet to be selected) contractor developing a variable area throttling engine.

Early in the development program, one of the two technical approaches will be selected for completion of development.

The Bell Aerosystems Co., division of Bell Aerospace Corp., Texstron Company, Buffalo, N. Y., for development of the engine used in ascent from the moon and rendezvous with the Apollo command and service modules.

The Marquardt Corp., Van Nuys, California, for development of components of the reaction control system which orients and stabilizes the LEM.

The Hamilton Standard Division of United Aircraft, Windsor Lock, Connecticut, for development of the LEM environmental control system.

Grumman was recently awarded the contract for development of the Apollo lunar excursion module by NASA's MSC, Houston, Texas.

Ralph Johnson

NEWS RELEASE
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
Manned Spacecraft Center - Houston 1, Texas
Walnut 8-2811, Extension 3751

63-15

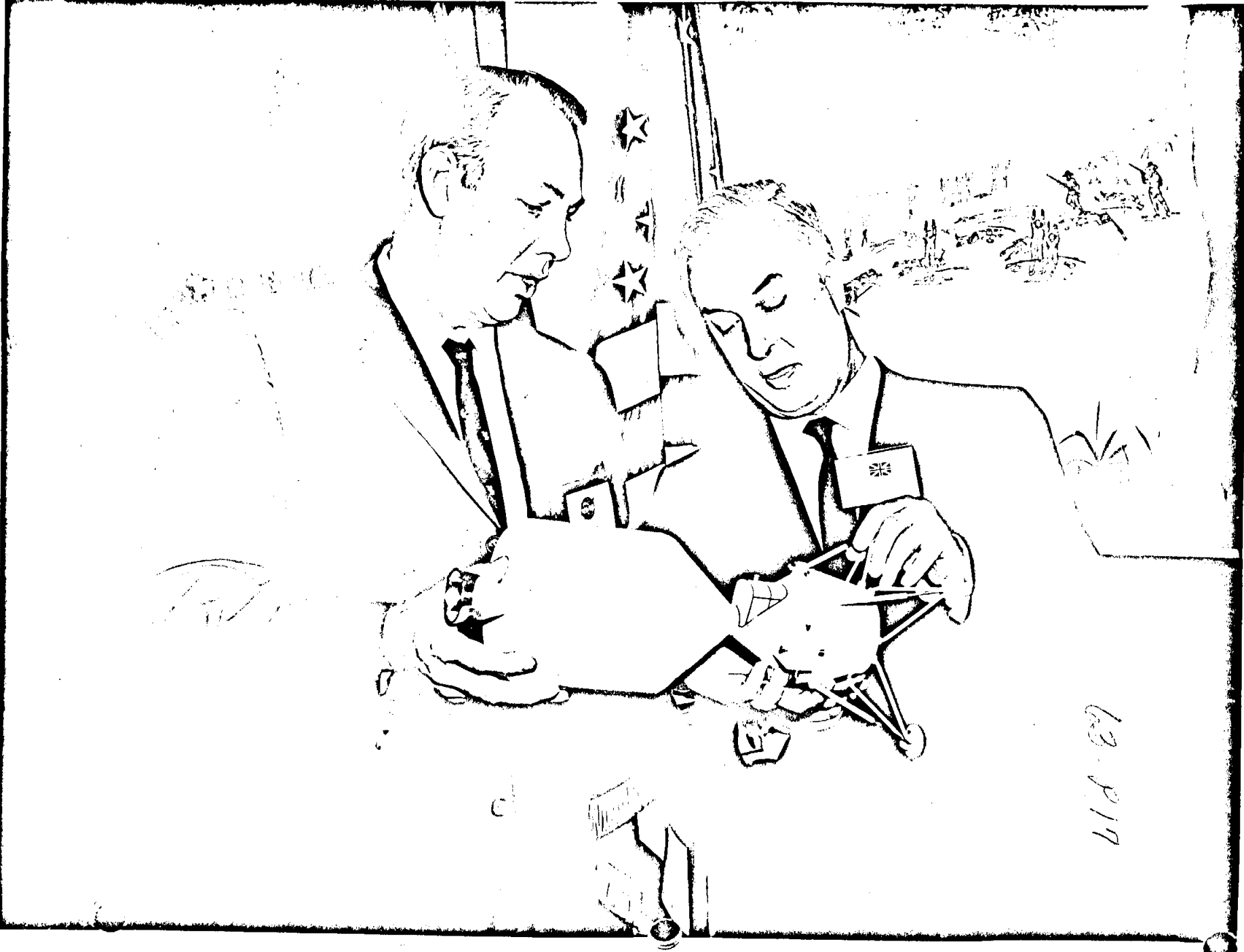
JANUARY 31, 1963

The Manned Spacecraft Center today revealed the amount of money involved in the contract negotiations with Grumman Aircraft Engineering Corporation to develop the lunar excursion module (LEM) for the Apollo spacecraft.

The figure, including the fixed fee, amounts to an estimated 387.9 million dollars.

The Grumman Aircraft Engineering Corporation is presently engaged in pre-negotiation discussions with several firms for subcontracting the LEM's propulsion, reaction control and environmental systems.

These are the Rocketdyne Division of NAA, Inc., Canoga Park, Calif.; the Bell Aerosystems Co., division of Bell Aerospace Corp., Textron Co., Buffalo, N. Y.; the Marquardt Corp., Van Nuys, Calif., and the Hamilton-Standard Division of United Aircraft, Windsor Lock, Connecticut.



63-819

Manned Spacecraft Center (left) uses a model of the command and lunar excursion modules to explain details of the Apollo Spacecraft to Mr. Allen Price, Great Britain's Consul in Houston. Mr. Price, Dean of the Houston Consulate Corps, and the consuls of 18 other nations today (February 1, 1963) attended a special program to familiarize them with the Manned Spacecraft Center's activities and goals in space.

MSC-63-P17

Special Assistant to the Director MSC, with the Consulate Corps, Great Britain, on his visit to the Spacecraft Center.

OFFICIAL NASA PHOTOGRAPH

Public Affairs Officer, NASA Space Administration
publication of this photograph.

Official advertising must be approved, in advance, by the Public Affairs Officer, NASA Space Administration, Manned Spacecraft Center, Houston 1, Texas.

S-63-929

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
MANNED SPACECRAFT CENTER  Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-18
February 11, 1962

Houston -- The Manned Spacecraft Center of the National Aeronautics and Space Administration today announced the award of a \$15,029,420 contract to Raytheon Company's Space and Information Systems Division of Lexington, Mass., for an important phase of the Apollo lunar Mission.

MSC said Raytheon, under the contract terms, will provide industrial support to the Massachusetts Institute of Technology, which is developing the guidance and navigation systems for Apollo, in the design and development of the on-board digital computer for the lunar command module.

In addition, the electronics firm will be responsible for production of the computer and its associated ground support equipment.


The Apollo on-board computer will process data for the automatic operation of certain flight functions and present essential information to the crew for navigation and control of the command module during the lunar mission.

The associated ground support equipment to be produced by Raytheon under the contract will include the computer test set, computer simulator and computer calibration equipment.

Work will be performed at Raytheon's Sudbury, Massachusetts facilities.

###

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
MANNED SPACECRAFT CENTER  Houston
Houston 1, Texas

Galveston 8-2811
Extension 3751

MSC 63-19
February 5, 1963

WORLD FOR RELEASE AT 8:30 P.M. - FEBRUARY 8, 1963

A new Aerospace Summer Intern Program to give 30 of the Nation's outstanding college students an opportunity to work and study at the Manned Spacecraft Center in Houston was announced tonight by the Center's Director, Dr. Robert R. Gilruth.

Speaking at the Space Fiesta at Texas A & M College, Dr. Gilruth said that the program was designed to "tie in" practical experience with academic training by giving work assignments and classroom training in the Center's space projects.

Science and engineering students will be selected for 20 of the internships while the remaining 10 will be filled by students in public and business administration.

Intern selection will be from both graduate and undergraduate students of good scholastic standing who plan to continue their academic training. Qualification requires that the junior year of college be completed by June 17, 1963 or

-more-

Hold for release at 8:30 P.M.
February 8, 1963

MSC 63-19
Feb. 5, 1963

that graduate students fulfill their B. A. or B. S. degree requirements by that date. All interns must be strongly recommended by their college deans or department heads.

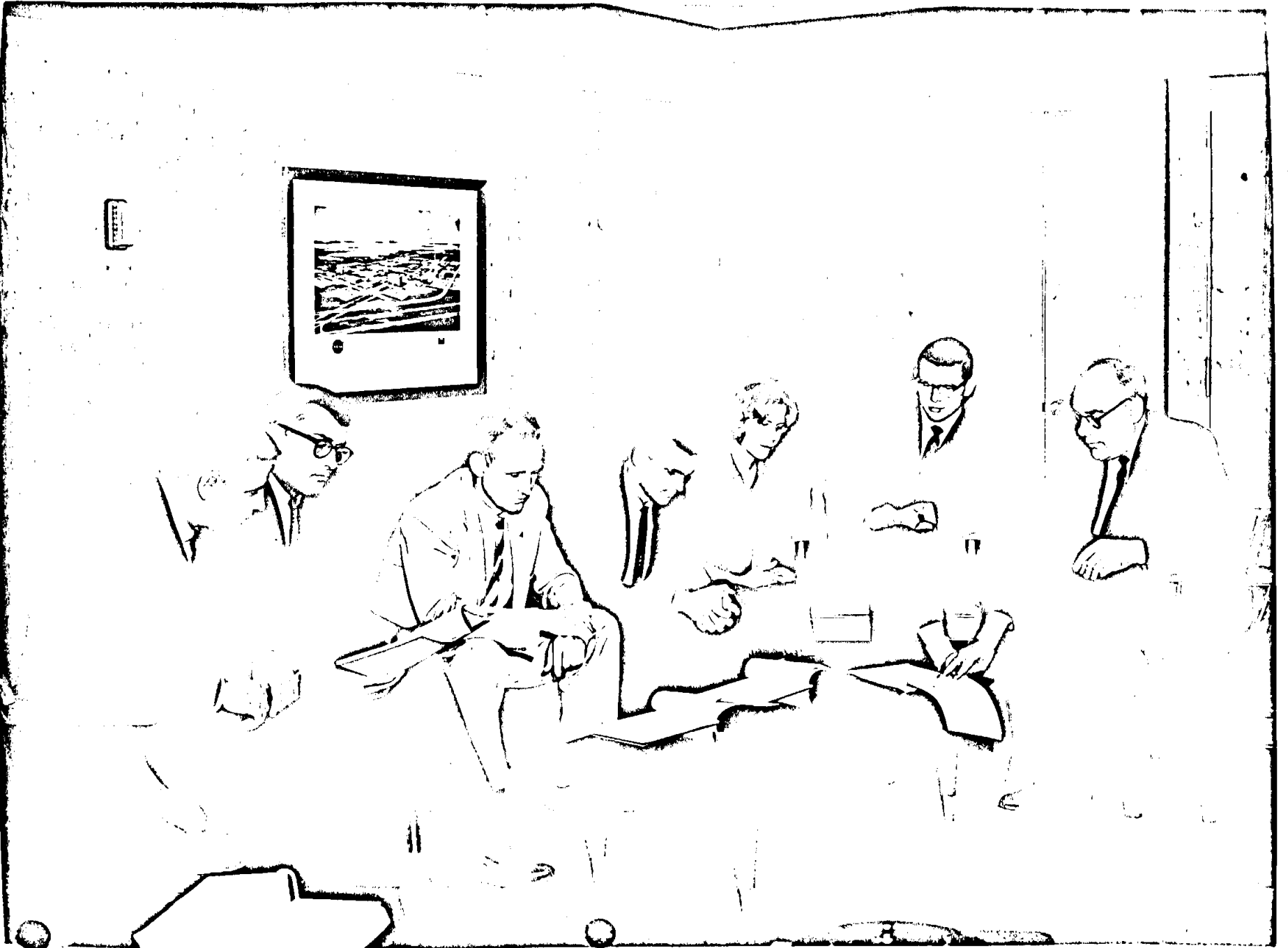
The Aerospace Summer Intern Program will start June 17 and extend through August 30, 1963. Undergraduates will be paid salaries of approximately \$857 while graduate interns will receive approximately \$1154 for the 75-day period.

The science and engineering interns will work under the direction of senior Manned Spacecraft Center engineers and scientists with duties that are related as far as possible to the students' academic training and background. They will also attend daily Aerospace Engineering Seminars which have been developed by senior technical staff members of the Center and will constitute a special course based on MSC's experience in conducting the Mercury, Gemini, and Apollo Programs. Although this course is not available in colleges at this time, Rice University and the University of Houston plan to offer it during the 1963 - 64 school year.

Public and Business Administration interns will likewise be given assignments which are related to their special interest and academic background. In some instances, duties will be rotated to give experience in more than one Division within the Center. They will attend weekly seminars of two hours duration at a level comparable to graduate courses in management theory.

Further information and details of the program will be made available through colleges and universities throughout the country.



#####



ADDITIONAL ROADNET REQUIRED FOR NASA MANNED SPACECRAFT CENTER



NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
MANNED SPACECRAFT CENTER   Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-20
Feb. 5, 1963

The delay in the orbital flight of astronaut Leroy Cooper scheduled for April was confirmed today by NASA. This delay has been caused by electrical wiring problems in the launch vehicle control system which are peculiar to Atlas 130-D, the booster to be used for the MA-9 mission. The spokesman said that further information would not be available until a complete evaluation has been made by General Dynamics Astronautics at San Diego, the prime contractor for the Atlas launch vehicle, and the Space Systems Division of the Air Force, procurement agency for the vehicle.

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
MANNED SPACECRAFT CENTER  Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-21
February 8, 1963

FOR IMMEDIATE RELEASE

COLLEGE STATION, TEXAS - SPECIAL

Robert R. Gilruth, Director of NASA Manned Spacecraft Center in Houston, was named Thursday as a Visiting Professor of Aerospace Engineering at Texas A & M College. A & M President Earl Rudder said the addition of the eminent rocket and missile engineer would add great depth to A & M's program of space technology.

Gilruth, who served as Director of Project Mercury and was awarded NASA's distinguished service medal in 1962 by President Kennedy, will begin a series of lectures in the fall of 1963. He will serve as Visiting Professor without compensation.

In accepting the appointment Gilruth said, "I share A & M's interest in updating both students and staff in the changing engineering requirements of the space age and welcome this opportunity to help in this most important area." The new A & M lecturer received both bachelor's and masters' degrees in aeronautical engineering from the University of Minnesota and has received honorary

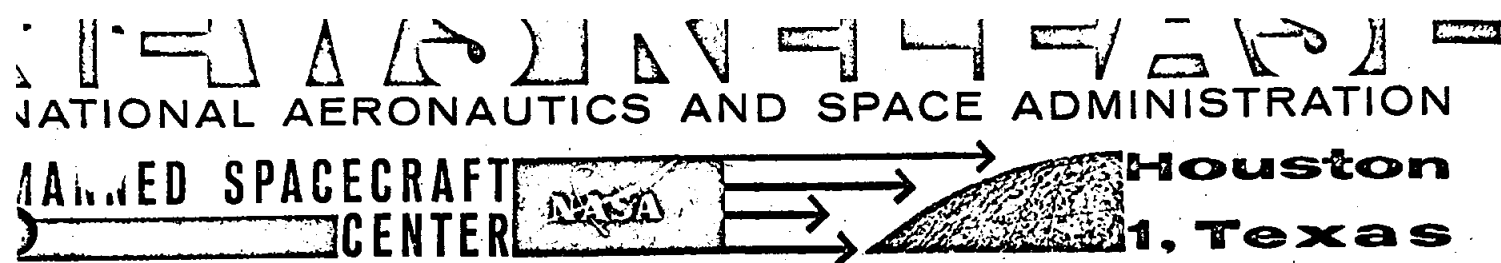
-more-

News Release MSC 63-21
February 8, 1963

Doctor of Science degrees from Indiana Institute of Technology, University of Minnesota, and George Washington University. He won international recognition in the 40's for his research on the characteristics of aircraft in flight while with the National Advisory Committee for Aeronautics - predecessor to NASA. He has also pioneered work in this country in the development of high-speed hydrofoil craft.

In 1950, Gilruth was awarded the Sylvanus Albert Reed Award by the Institute of Aeronautical Sciences for notable contributions to aeronautical research. In 1962 he received the Robert H. Goddard Memorial Trophy of the National Rocket Club for his leadership of Project Mercury, and most recently as elected Honorary Fellow for 1962 of the Institute of Aerospace Sciences. Gilruth, a veteran of 23 years of Government service, has served as Department of Defense advisor on guided missiles and aeronautics, and a member of the U.S.A.F. Scientific Advisory Board.

###



Walnut 8-2811
Extension 3751

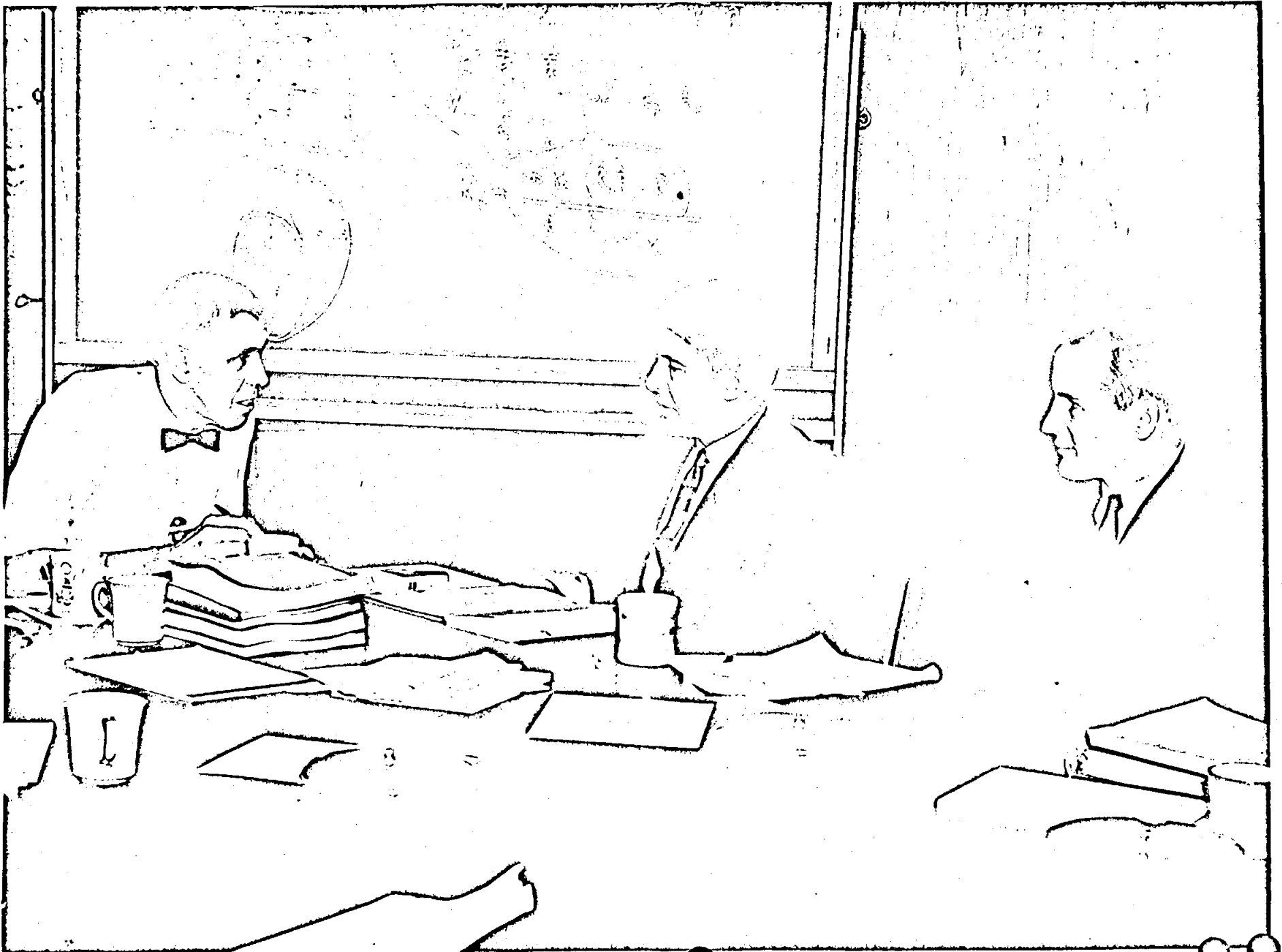
MSC 63-P23
February 11, 1963

FOR IMMEDIATE RELEASE

ASTRONAUTS STUDY ORBITAL MECHANICS

Manned Spacecraft Center visiting lecturer Harm Buning (left), Associate Professor in Aeronautical Engineering at University of Michigan, who recently conducted a three-day orbital flight mechanics seminar as part of the astronaut training program, explains some fine points of space and reentry mechanics to Astronauts Walter M. Schirra (center) and Edward H. White II (right).

NASA
S-63-584



NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
MANNED SPACECRAFT CENTER  Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-24
February 11, 1962

HOUSTON, TEXAS - The NASA today selected the Marion Power Shovel Company in Marion, Ohio to design and build a gigantic crawler-transport vehicle which is to:

-- Pick up a fully assembled Apollo lunar spacecraft mated to a three-stage Saturn V launch vehicle, weighing 500,000 pounds, plus necessary launch equipment, towering 400 feet high and weighing, all told, some 12,000,000 pounds;

-- Haul it a little over two miles, all the while keeping it within about 1/10 of a degree of true level, and deposit it gently on a Merritt Island, Florida, launch pad.

What's more, the crawler must be able to perform this feat in winds of at least 45 knots.

The crawler itself will weigh some 5.5 million pounds but it will be able to lift and carry more than twice its weight. The squat 130 foot long, 115 foot wide behemoth, only 20 feet tall, would cover the in-field of a major league baseball diamond.

The crawler is one of the key elements of planning for NASA Launch Opera-

-more-

tion Center's Complex 39 from which manned lunar Apollo missions will be launched. Plans call for Apollo-Saturn V to be assembled in a 520 tall vertical assembly building and transported via crawler to a launch pad for fueling, final tuning up and boarding by astronaut.

Apollo-Saturn V which must reach the velocity of some 24,000 miles an hour to achieve a lunar mission, will travel its first few miles to the pad at a velocity of not more than one mile an hour. Top speed of the crawler will be two miles an hour.

NASA plans to buy two crawlers to serve the three or more pads that will be built at Complex 39. The vehicles will cost between four and five million each. The first should be undergoing test runs at the new NASA Merritt Island launch area by late 1964.

Here are some of the crawler's vital statistics:

Each of its four crawler trucks, measuring about 24 by 40 feet, will feature a pair of steel link belts. There will be a total of 16 electric driving motors, two driving each of the eight link belts. The motors in turn will be powered by two 2800 horsepower diesel generators.

The crawler will shoulder its load at each corner on a unique system of four hydraulic cylinders grouped around a rigid 48 inch diameter guide tube. The leveling system is to maintain the chassis within one-tenth of one degree of level at all times even while climbing a five per cent grade.

It will be able to turn at the rate of ten degrees a minute and be operated from identical control cabs at either end by two men.

The company plans to build a major crawler component at its plant in Orion and transport it by rail to Merritt Island for final assembly.

#

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
MANNED SPACECRAFT CENTER  Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-25
February 11, 1963

HOUSTON, TEXAS -- The first series of tests on Gemini's back-up parachute recovery system, planned for early unmanned and manned flights pending completion of the Gemini paraglider system, have been successfully completed at El Centro, California, by Manned Spacecraft Center personnel.

The 20-test series checked out the deployment characteristics of the system, and the structural integrity of the individual chutes. Soon-to-begin Phase II tests will check out Gemini boilerplate spacecraft harnessed, or bridled, to the chute at a 55-degree angle from the horizontal--the descent position of the spacecraft. The 55-degree impact angle eliminates the need of the "impact bag" used on Mercury spacecraft, and lowers the shock of landing by impacting on the corner of the heat shield.

The parachute recovery system consists of an ¹⁸ 12-foot diameter ring-sail drogue and an 84-foot diameter ring-sail main chute packed in a rendezvous-and-recovery system canister which also includes the Gemini radar recovery aid. The drogue is essentially scaled down from Mercury, while the main chute is scaled up from Mercury.

-more-

MSC 63-25
Feb. 11, 1963

Test drops using "bombs" duplicating the spacecraft's weight were made from a USAF C-130 cargo transport from 10,000 to 15,000 feet altitude.

"We achieved every aim we were after," said Ken F. Hecht of MSC's Gemini Project Office, "with only minor difficulties in early tests. The chute had a tendency to tuck under, hindering full inflation. From then on, we had complete success."

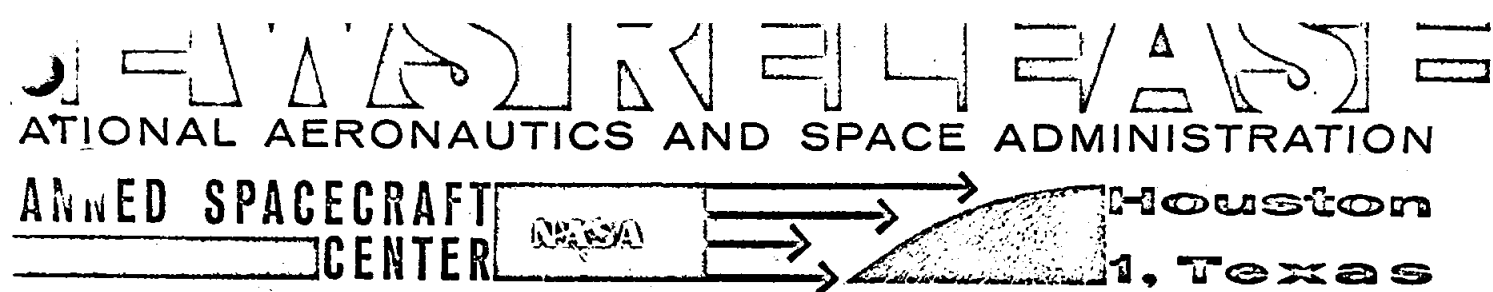
The first four tests used only the drogue chute to determine ascent rate. Two simple weight drops followed to check strength characteristics of the main chute, and the entire sequencing was studied beginning with the seventh drop.

After configuration was finalized, MSC personnel established 'reefing times'. 'Reefing', or restricting the skirt from opening until it has slowed down to a safe speed, prevents excessive loading on the canopy. At a safe speed, 'dis-reefing' releases the band and allows the canopy to blossom.

Loads in pounds per square foot (psf) were increased steadily from test drop 14, from opening design load of 120 psf to ultimate design load of 180 psf in the last two tests. Only minor damage to the canopy was incurred from "red-lined," or excessive loads.

The parachute system, made by Northrop's Ventura Division, is primarily a paraglider system back-up and will be used for wet landings of early unmanned and manned Gemini spacecraft. The paraglider, designed for dry landings, can be guided by the astronaut to a controlled landing at a pre-selected point.

#####



Inut 8-2811
tension 3751

MSC 63-26
February 12, 1963
6:00 p.m.

HOUSTON, TEXAS -- Mercury Atlas 9, the next manned U. S. orbital space flight attempt was re-scheduled for mid-May, NASA announced.

The delay from a previously planned April launch target date is attributable to a decision to rewire the Mercury-Atlas flight control system. Results of a continuing reliability study and an analysis of a failure which occurred during checkout of the MA-9 booster identified the flight control system wiring as a possible source of trouble.

Consequently, General Dynamic/Astronautics, assembly and test contractor for the Atlas vehicle, proposed a new wiring technique as a part of a constant effort to increase reliability and safety of a man-rated Mercury booster.

A technical management board met at the Air Force Space Systems Division at Los Angeles, Calif. today, to review the proposed schedule of work needed to make the change. The board included representation from the U. S. Air Force, Aerospace Corporation, General Dynamics/Astronautics and NASA's Manned Spacecraft Center.

###

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
MANNED SPACECRAFT CENTER  Houston
1, Texas

Walt 8-2811
Extension 3751

MSC 63-27
February 13, 1963

Houston, Texas -- The Manned Spacecraft Center announced today re-organization of the Apollo Spacecraft Project Office to accommodate the added tasks imposed by the contract for the development of the Lunar Excursion Module under negotiation with the Grumman Aircraft Engineering Corporation.

Charles W. Frick, Apollo Project Manager, said Robert O. Piland will be Deputy Project Manager for the LEM and James L. Decker, formerly with the Martin Company in Baltimore, Md., has been assigned as Deputy Project Manager for the Command and Service Modules.

Frick said the deputy managers will have responsibility for cost, schedule, technical design and production of the three-module Apollo Spacecraft, under the over-all direction of the project manager.

Other Apollo organizational changes include establishment of a Spacecraft Systems Office for the Command and Service Modules with Caldwell C. Johnson as Manager, and Clinton L. Taylor as Assistant Manager, and a

-more-

similar office for the LEM with Owen E. Maynard, Acting Manager, and William F. Rector III, Assistant Manager. A Spacecraft Systems Office for Guidance and Control, headed by Dave W. Gilbert with Paul Ebersole as Assistant Manager, was also established.

J. Thomas Markley has been designated Special Assistant to the Manager with full responsibility to negotiate with North American Aviation, Inc., now under letter contract for the Apollo Command and Service Modules.

William J. Rhine will fill the Resident Apollo Spacecraft Office in Boston, Massachusetts, reporting to Gilbert. The Massachusetts Institute of Technology has been contracted by MSC for the Apollo's guidance and control system.

John W. Small, Jr. will be located at the Resident Apollo Spacecraft Project Office in Bethpage, Long Island, New York, home of Grumman Aircraft Engineering Corp., which has been negotiating with MSC for the LEM contract.

A Resident Apollo Spacecraft Project Office had previously been established at North American Aviation, Inc. at Downey, California, with George Lemke as Resident Manager.

Decker, 39, served as manager of Martin Company's Advance Design Engineering Department, and as technical director of the Gemini Launch Vehicle Program. Prior to this, he served as a Martin staff engineer for the DYNA-SOAR launch vehicle program, and as chief of Engineering Systems Requirements for Titan I and Titan II missiles during the time the Titan II design was being established.

Decker did extensive aerodynamic, stability and control work in the development of the U.S. Navy's P4M, P5M, and the first multijet seaplane - the XP6M1.

In 1957, Decker became the Martin representative on the Aircraft Industries Association Airworthiness Requirements Commission and served in this capacity two years. He was graduated from Rensselaer Polytechnic Institute in 1944 with a bachelor in aeronautical engineering (BAE).

APOLLO SPACECRAFT PROJECT

Manager - C. W. Frick
Deputy Manager, LEM - R. O. Piland
Deputy Manager, C&SM - J. L. Decker
Special Assistant - J. T. Markley

RMSCO - WSMR
Resident Manager - W. Messing

RASPO - AMR
Act. Res. Manager - E. Harris

RASPO - Bethpage
Act. Res. Manager - J. Small

RASPO - Downey
Resident Manager - G. A. Lemke

Flight Projects Office
Manager - A. Mardel
Asst. Manager - O. G. Morris

Systems Integ. Office
Manager - P. Weyers

Program Plans & Control Ofc.
Manager - T. Baker
Asst. Manager - C. McCollough, Jr.

Spacecraft Systems Office, LEM
Acting Manager - O. E. Maynard
Asst. Manager - W. F. Rector

Spacecraft Systems Office, G&C
Manager - D. W. Gilbert
Asst. Manager - P. Ebersole

Spacecraft Systems Office, C&SM
Manager - C. C. Johnson
Asst. Manager - C. Taylor

NASA INSTALLATIONS

AMES RESEARCH
CENTER

PACIFIC LAUNCH
OPERATIONS OFFICE

WESTERN OPNS
OFFICE

JET PROPULSION
LABORATORY
(CONTRACTOR)

FLIGHT RESEARCH
CENTER

NUCLEAR ROCKET
DEVELOPMENT
STATION (NASA-AEC)

MANNED
SPACECRAFT CENTER

MICHOD PLANT
(MSFC)

MISSISSIPPI TEST FACILITY
(MSFC)

PLUM BROOK
STATION (LEWIS)

LEWIS RESEARCH CENTER

ELECTRONICS RESEARCH CENTER
NORTH
EASTERN OFFICE

GODDARD SPACE
FLIGHT CENTER

WALLOPS STATION

NASA HEADQUARTERS

LANGLEY
RESEARCH CENTER

LAUNCH OPERATIONS CENTER

MARSHALL SPACE
FLIGHT CENTER



NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
MANNED SPACECRAFT CENTER   Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-27
February 13, 1963

Shankle

Houston, Texas -- The Manned Spacecraft Center announced today re-organization of the Apollo Spacecraft Project Office to accommodate the added tasks imposed by the contract for the development of the Lunar Excursion Module under negotiation with the Grumman Aircraft Engineering Corporation.

Charles W. Frick, Apollo Project Manager, said Robert O. Piland will be Deputy Project Manager for the LEM and James L. Decker, formerly with the Martin Company in Baltimore, Md., has been assigned as Deputy Project Manager for the Command and Service Modules.

Frick said the deputy managers will have responsibility for cost, schedule, technical design and production of the three-module Apollo Spacecraft, under the over-all direction of the project manager.

Other Apollo organizational changes include establishment of a Spacecraft Systems Office for the Command and Service Modules with Caldwell C. Johnson as Manager, and Clinton L. Taylor as Assistant Manager, and a

-more-

similar office for the LEM with Owen E. Maynard, Acting Manager, and William F. Rector III, Assistant Manager. A Spacecraft Systems Office for Guidance and Control, headed by Dave W. Gilbert with Paul Ebersole as Assistant Manager, was also established.

J. Thomas Markley has been designated Special Assistant to the Manager with full responsibility to negotiate with North American Aviation, Inc., now under letter contract for the Apollo Command and Service Modules.

William J. Rhine will fill the Resident Apollo Spacecraft Office in Boston, Massachusetts, reporting to Gilbert. The Massachusetts Institute of Technology has been contracted by MSC for the Apollo's guidance and control system.

John W. Small, Jr. will be located at the Resident Apollo Spacecraft Project Office in Bethpage, Long Island, New York, home of Grumman Aircraft Engineering Corp., which has been negotiating with MSC for the LEM contract.

A Resident Apollo Spacecraft Project Office had previously been established at North American Aviation, Inc. at Downey, California, with George Lemke as Resident Manager.

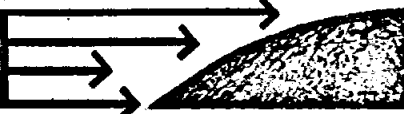
Decker, 39, served as manager of Martin Company's Advance Design Engineering Department, and as technical director of the Gemini Launch Vehicle Program. Prior to this, he served as a Martin staff engineer for the DYNA-SOAR launch vehicle program, and as chief of Engineering Systems Requirements for Titan I and Titan II missiles during the time the Titan II design was being established.

Decker did extensive aerodynamic, stability and control work in the development of the U.S. Navy's P4M, P5M, and the first multijet seaplane - the XP6M1.

In 1957, Decker became the Martin representative on the Aircraft Industries Association Airworthiness Requirements Commission and served in this capacity for two years. He was graduated from Rensselaer Polytechnic Institute in 1944 with a bachelor in aeronautical engineering (BAE).

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT
CENTER



Houston
1, Texas

WA 8-2811
Ext. 3751

MSC 63-32
February 20, 1963

Ralph

For Immediate Release

MSC AWARDS FIRE PREVENTION, PROTECTION CONTRACT

Houston, Texas -- A contract in the amount of \$17,294 has been awarded by the Manned Spacecraft Center to the Houston Fire Safety Equipment Company for accomplishing various services associated with a general fire prevention and protection program for facilities including all of the MSC temporary sites in the Houston area.

The range of services under the contract includes conducting a comprehensive fire prevention and protection survey of the temporary sites, performance of fire prevention and equipment inspections, training of designated MSC personnel in fire prevention and use of emergency firefighting equipment, development of emergency fire plans for each facility and rendering consultative services in fire protection engineering matters.

The contract negotiator is Raymond A. LaPlante of the Center's Facilities and Construction Procurement Office. The fire protection and prevention program of the Manned Spacecraft Center comes under the purview of the Center's Safety Branch, headed by John M. Kanak of the Center Medical Operations Office.

Fire prevention and protection services for the permanent facilities being constructed at Clear Lake by MSC will be covered by later arrangements.

C



NATIONAL AERONAUTICS AND SPACE ADMINISTRATION MANNED SPACECRAFT CENTER Houston 1, Texas



WA 8-2811
Ext. 3751

Ralph
MSC 63-28
February 27, 1963

HOUSTON, TEXAS -- A manned orbital rotating space station, capable of conducting research in space and assisting development of systems and operations for exploration of distant Mars and Venus, is being studied as a part of the long range plans of the Manned Spacecraft Center and other NASA centers.

The Houston space center, along with other elements of NASA, in anticipation of a manned orbital space station program as a logical future program, is conducting studies through contracts with industry on the feasibility of operation, definition of configuration, and preliminary design of such a vehicle.

Recently, 22 companies submitted bids on a request for proposals from MSC to study an energy generation and storage system for a space station. The selected contractor will investigate and compare systems for power distribution.

Additional space station studies will involve an environmental control (life-support) system, preliminary designs of manned orbiting space stations and logistics spacecrafts, and an operations and logistics analysis as recently announced in the NASA industry briefing.

The Langley Research Center is also conducting studies in various areas of space station development.

Although there is no approved national space station program at the present time, MSC officials emphasize the potential role of the space station as an important step in manned spaceflight.

The results of work contracted by MSC will aid in the establishment of program definition, schedules, applications, and research experiments essential to the over-all long range manned space flight goals.

"We need to determine many things about the operational environments of space; we need to conduct research on materials, finishes, and processes and to develop many other techniques; we need to develop and qualify systems for advanced missions; more than we know from Mercury, and more than we'll learn from Gemini and Apollo flights," an MSC spokesman commented.

The space station as an orbiting laboratory could conduct all types of basic and applied scientific research to further Man's advances in space. Results of

--more--

experiments could establish design criteria for future programs.

Scientific data could be obtained to meet the requirements specified by other programs.

Proposals for advanced systems could be researched and qualified for future use, particularly where testing is not physically or economically practical on Earth.

Long term investigations of biological, physiological, psychological, hereditary and genetic factors related to Man, animals and plants, could be studied.

And, the availability of a very hard vacuum with unlimited capacity for research or applications testing gives the space station added purpose.

The required technology in many ways is less demanding than that for Project Apollo, which involves extensive developments in guidance and navigation, reentry heat protection, propulsion sub-systems, and lunar landing devices. Launch vehicles, such as Saturn IB and Saturn V, with large payload capabilities, and launch sites developed in Apollo program will be available. With a Saturn V launch vehicle, a space station could be orbited with a large crew and equipment capability and could stay in orbit for prolonged periods with sufficient electrical power capability to conduct a wide, versatile variety of tasks.

There are three space station concepts now undergoing consideration. One approach involves a large, rotating space station of flexible capability, launched by a Saturn V launch vehicle and supported by flights of a number of shuttle or logistic spacecraft.

Another approach is a two-step program beginning with the launching into earth orbit of a modified Apollo or Gemini spacecraft with an attached research laboratory. Flight duration of several months would be possible to test out feasibility and work out preliminary details of a larger space station.

The third approach is a building-block arrangement using existing designs and tooling from various launch vehicle stages to construct cylindrical and spherical building-block modules. Appropriate segments could be used to build man-occupied modules from proven, tested, and qualified building-block units.

Because the space station would remain in orbit for a period of a year or more, and would have no reentry and landing capabilities, resupply of the vehicle and crew rotation become major problems. A logistics spacecraft, carrying men and supplies and launched periodically from Earth, could rendezvous with and dock with the space station. The logistics spacecraft could also be used for reentry and landing in both normal and emergency operations. Present ideas suggest modifying present spacecraft to six and 12-man sizes.

Docking, especially with a rotating space station, presents problems too.

The most logical place to dock is at the hub of the station, to avoid extensive maneuvering of the logistics spacecraft and to avoid disturbing the station. Feasible ideas at the moment involve approaching the station using a rolling maneuver to match the angular rotation of the station, or installing a non-rotating hub in the space station.

A rotating configuration is considered especially desirable in that the space station can create an artificial gravity for personnel on board. A non-rotating central area can be used for experimentation in a zero-g environment.

Another desirable feature of a rotating space station is the high inertial stability which comes from an evenly distributed mass in rotation -- the fly-wheel effect. Spin stabilization maintains station orientation and prevents the build-up of large motions which could be detrimental to operations, to docking maneuvers, and to abandoning the station in an emergency.

Other methods of docking, cargo transfer, and stowage of logistics spacecraft at the space station are also now under study.

The space station is a program which can accomplish a variety of significant achievements and future planetary missions may well be dependent on the availability of research data and design criteria which only a space station can elop and provide.

If a man has serious physiological limitations the space station could become a unique facility for investigating and absolving these limitations, permitting him to perform essential functions effectively and efficiently for the long periods necessary for successful manned planetary flight missions.

Personnel at the station could investigate environmental hazards such as radiation and meteoroids, incorporating their findings into design of planetary spacecraft. Research on plants, animals, materials, finishes, processes, and equipment in the operational space environment could also support planetary flight missions.

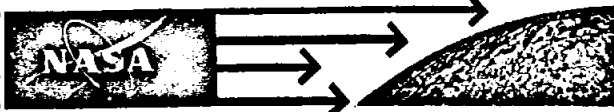
-- e n d --

NASA

S-63-583



NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
MANNED SPACECRAFT CENTER  Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-30
February 20, 1963

U. S. ORBITAL SPACE FLIGHT ANNIVERSARY

HOUSTON, TEXAS -- Poised for its spectacular mission, lox streaming from its side, the giant ATLAS towered against the sun rising on the horizon. Atop, in the MA-6 "Friendship 7" spacecraft, John H. Glenn, Jr., busied himself in the final checklist as the countdown proceeded to its final seconds.

The engines gimbaled with a sudden vibration, flexing the metal skin, shuddering solidly. With an immediate, gentle surge, the ATLAS lifted slowly, and while the hearts of a world stood still, it launched a U. S. Astronaut into America's first three-orbit mission around the Earth.

Today, on the anniversary of that historic flight of February 20, 1962, and on the eve of what may be the final flight in the Mercury series, Kenneth S. Kleinknecht, Mercury Project Manager, reflected:

"Three U. S. Astronauts have accumulated 1,144.51 minutes in orbital space flights. The flights of Glenn, Carpenter and Schirra have confirmed that man can perform in a space environment and that he can enhance the mission success and flight safety by virtue of his flexibility and his capability to exercise judgment to solve operational problems.

-more-

"The flights have also confirmed that the approach and philosophy followed in the design of the Mercury spacecraft was technically sound. Each of these flights has elevated our confidence level in the spacecraft systems and has demonstrated that, although not a simple task, the resources of the United States -- that is, the National Aeronautics and Space Administration, the Department of Defense, private industry and other elements -- can be unified toward a common end with unparalleled cooperation to accomplish a national objective on a minimum time schedule.

"All these benefits derived from the Mercury Project are directly applicable to future manned space flight programs and provide a solid foundation on which to base the Gemini and Apollo programs."

Astronaut John Glenn, the man who made the flight, looked back only long enough to set sight on future goals:

"Looking back ... is only beneficial if such an event shows us how these past stepping stones have contributed to our present status and how we should proceed in the future. We have learned a lot about space flight in the past year, and I am naturally proud to have been a part of it. All of these events, however, are best used, not as separate accomplishments for the whole Mercury team, but to provide a means for revealing the direction we should follow in the future.

"Considering this as one of the greatest efforts in the history of exploration, it is probably safe to assume that mankind will eventually realize tremendous benefits.

"One of the most gratifying things of the entire space program has been the effort and dedication put forth by so many individuals to accomplish the successful missions that have been flown in a comparatively short period of time . . . but along with all this hard work and dedicated effort have come those periods of exhilaration that occur only as individuals have realized that they have made a significant contribution to science and the progress of our country. I hope that we can all experience many more such moments together in the future."



Walnut 8-2811
Extension 3751

MSC 63-31
February 20, 1963

LITTLE JOE II CONTRACT

HOUSTON, TEXAS -- A \$6.3 million contract definitizing the cost, design and manufacture of Little Joe II sub-orbital launch vehicles, its launchers and range support, was made public today by the Manned Spacecraft Center of NASA and General Dynamics/Convair.

The formal contract calls for four Little Joe II vehicles, two launchers, and support at the White Sands Missile Range in New Mexico.

The Little Joe II, designed as an economical and expendable launch vehicle for testing boilerplate models of the Apollo spacecraft in unmanned, sub-orbital flights, is scheduled for first flight in mid-1963. Now being fabricated and assembled at the General Dynamics/Convair plant in San Diego, California, the first Little Joe II will be able to accommodate as many as seven solid fuel Algol engines developing a maximum thrust of about 800,000 pounds. The vehicle has been designed for a maximum Apollo payload of 80,000 pounds.

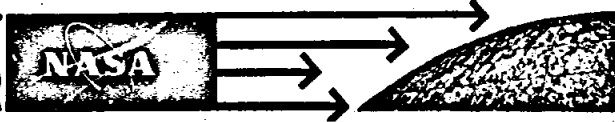
-more-

General Dynamics/Convair was selected by the Manned Spacecraft Center of Houston, Texas, in May, 1962 as the Little Joe II contractor. Today's announcement firms the program's exact dollar value and the number of launch vehicles and associated tasks required, termed "definitization" of the contract.

The ultimate objective of the Apollo Project is to land U. S. Astronauts on the moon.

#

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
MANNED SPACECRAFT CENTER  Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-35
February 26, 1963

Ralph

A British aviation medicine specialist in climatic and respiratory physiology has been assigned to the National Aeronautics and Space Administration's Houston space center, marking the first direct foreign appointment to the Manned Spacecraft Center.

Dr. John Billingham, formerly with the Royal Air Force Institute of Aviation Medicine, Farnborough, England, and the RAF, will assist Dr. George B. Smith, Head of the Environmental Physiology Branch in the Crew Systems Division.

"Dr. Billingham has a very specialized background in water and thermal balance research," an MSC official disclosed. "He has studied problems in body temperature regulation .. how liquids in the body are affected by temperature. We feel his background in aviation medicine . . . is an excellent addition to the Center."

At the RAF Institute of Aviation Medicine, Dr. Billingham carried out basic and applied research in aviation medicine, concentrating on climatic and respiratory physiology. He contributed research to the Bioaeronautics Group at the Royal Aircraft Establishment, Farnborough, and also served as ~~their~~ representative to international aerospace medical conferences.

Dr. Billingham began preclinical studies, specializing in physiology, at Oxford University's medical school. He was awarded Open Exhibition (scholarship) to Guy's Hospital in London, where he continued clinical studies in medicine, surgery, and obstetrics. Upon completion, he was awarded Masters of Arts (M.A.), Bachelor of Medicine (B.M.), and Bachelor of Surgery (B. Ch.) degrees from Oxford University.

Following internship in medicine and surgery at Hampstead General Hospital in London, he entered the RAF as a flying officer (Lieutenant) and was assigned to the RAF Institute of Aviation Medicine. Dr. Billingham resigned his RAF commission in 1963 to join the Manned Spacecraft Center.

Dr. Billingham was born in Worcester, England, in 1930. His father, Edgar Billingham, is a retired schoolteacher. His wife, Margaret (nee Macpherson), and two children -- Robert, 5, and Graham, 3 -- arrived in Houston in mid-February and are presently engaged in house-hunting.

Dr. Billingham is a member of the British Medical Association, a Fellow of the Royal Society of Medicine, and an elected (1952) Associate of the Royal Photographic Society.

He is an avid photographer and holds many exhibition and provincial awards for his work.

###

P-36

NASA
S-63-1304



NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANAGED SPACECRAFT CENTER

1601 MICHIGAN AVENUE, WASHINGTON, D. C. 20546

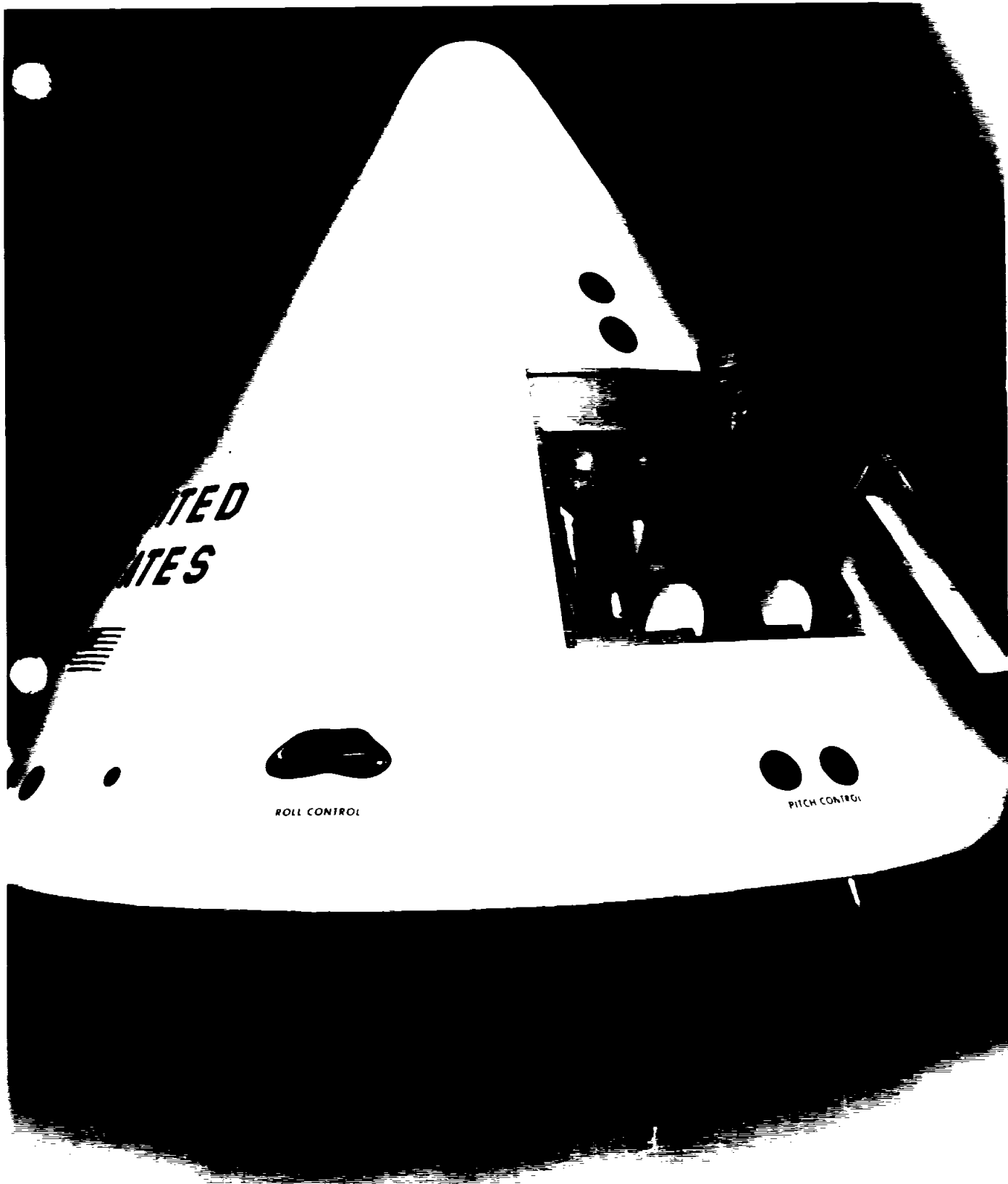
Walnut 8-2811
Extension 3751

MSC 63P37
March 12, 1963

TOMORROW, THE MOON

With what appears to be eager anticipation to make the trip, Manned Spacecraft Center Astronauts (left to right), M. Scott Carpenter, John H. Glenn, Jr. and Walter M. Schirra, Jr. climb into a mock-up of the Command Module of the Apollo spacecraft. The astronauts recently toured and inspected Apollo spacecraft facilities at North American Aviation's Space and Information Systems Division, Downey, California. An Apollo spacecraft with three U. S. astronauts on board will orbit the moon and land two of the men on its surface by 1970.

###



NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
MANNED SPACECRAFT CENTER  Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-38
March 4, 1963

Ralph

FOR IMMEDIATE RELEASE:

MSC ACQUIRES TEST VESSEL

HOUSTON, TEXAS -- A small land-and-water vessel is being beefed up to look like a destroyer (at least from the rear) so it can retrieve test spacecraft from the shallow waters of Clear Lake and Galveston Bay.

Purchased by the National Aeronautics and Space Administration's Manned Spacecraft Center, the former Army LCU (Landing Craft, Utility) upon modification will be able to lift a spacecraft the size of Apollo's command module out of the water. It will recover spacecraft and other objects used in air drops and flotation tests by MSC in nearby Texas waters.

The 115-foot stern of the vessel will be modified to resemble a destroyer's fantail enabling heavy-object retrieval. Later, if necessary, special lifting equipment can be installed on the vessel to increase its lifting power. The vessel's draft will be shallow to enter Clear Lake and its docking port near Seabrook.

The modified LCU's basic landing craft capability will be retained. It will be able to run up on a shallow beach to roll wheeled equipment aboard a ramp lowered from one end of the vessel.

Although the craft is primarily designed for shallow waters, it can also operate

in the Gulf of Mexico with provisions aboard to accommodate 12 people for 5 days.

Shipmaster for the craft is Frank Gammon of MSC's Flight Operations Division. He holds a Coast Guard marine license and has extensive Army experience in landing craft operation. An engineer will be hired to double the full-time crew.

The MSC vessel will be returned from New Orleans, where it is undergoing modification, and will be in full operation around May 1.

###

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
MANNED SPACECRAFT CENTER  Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-39
March 3, 1963

FOR IMMEDIATE RELEASE:

SCHOOL HAS SPACE SPEAKER

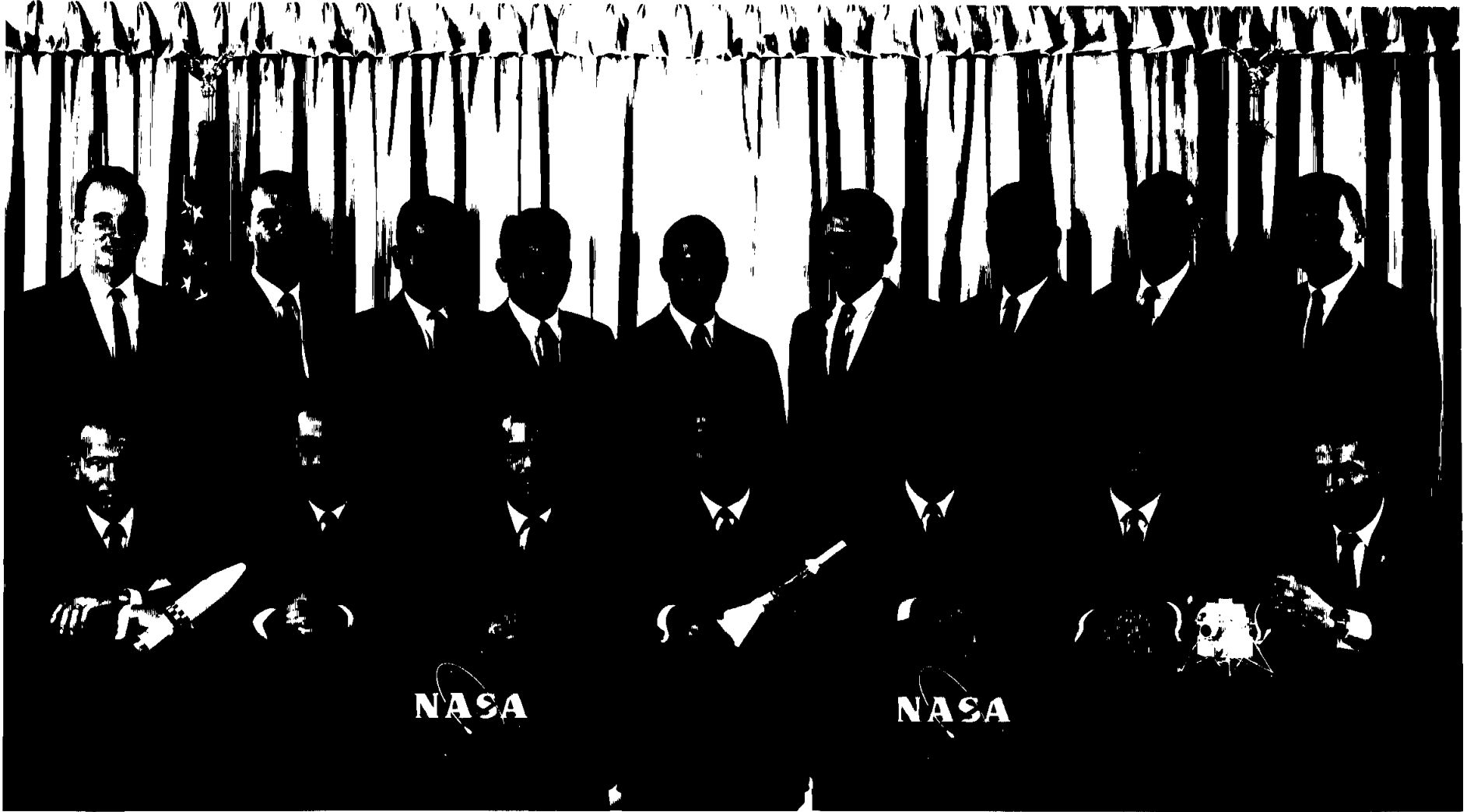
HOUSTON, TEXAS -- A Manned Spacecraft Center personnel training officer will discuss the challenge teachers and parents face in encouraging young people to seek technical college training, on Tuesday, March 5, at the Deer Park Senior High School.

Employee Development Officer Jack K. Pound of MSC's Personnel Training Branch will talk to a meeting of parents and teachers in the high school auditorium at 7:30 p.m.

Formerly with Champion Papers of Pasadena as their training supervisor, Pound has taught at Texas A & M College and at the Pasadena High School where he also served as Director of the Evening School in charge of adult education.

Pound, who is active in youth work, has contributed much of his time to Pasadena Rotary youth activities, to Boy Scout and Junior Achievement groups and to vocational guidance counseling of high school students.

###

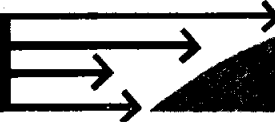


NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT
CENTER

NASA



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-41
March 4, 1963

FOR IMMEDIATE RELEASE:

PTA TO HEAR SPACE OFFICIAL

Houston -- Jack G. Cairl, chief of the Personnel Management Assistance Branch "A" of the Manned Spacecraft Center, will give a slide presentation on the overall manned spacecraft program at a meeting of the Bellaire High School Parent-Teach Association on March 12.


Mr. Cairl, who has had included in his duties at MSC assistance in the selection of the newest team of NASA astronauts last year, will also be prepared to discuss for the parents and teachers of Bellaire High the educational requirements of the space age.

Cairl has been a member of the Manned Spacecraft Center Personnel Division for the past two years and was engaged in Navy personnel activities for several years prior to coming with NASA. He holds B.A. and M.A. degrees in history from Michigan State University.

His two children attend Cynthia Parker Elementary School in the Westbury area.

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT CENTER  Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-43
March 4, 1963

FOR IMMEDIATE RELEASE:

MSC OFFICIAL TO SPEAK

Houston -- Jack R. Lister, chief of the Training Branch of the Manned Spacecraft Center Personnel Division, will speak at a meeting of the Anna B. Kelso Elementary School Parent-Teacher Association in Houston March 14.

Lister will discuss career opportunities and education requirements at Manned Spacecraft Center.

A native of Alabama, Lister holds a B.S. degree in education from Jacksonville State College and has done graduate study at the University of Alabama. He is a member of Kappa Delta Pi honorary educational society and of the American Society of Training Directors.

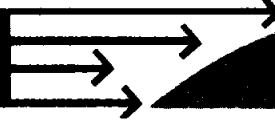
###

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT
CENTER

NASA



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-P44
March 4, 1963

FOR IMMEDIATE RELEASE

HOUSTON -- CUB SCOUTS SEE SPACE FLIGHT EQUIPMENT -- Harold F. Battaglia, a member of the Crew Equipment Branch of the Crew Systems Division of Manned Spacecraft Center, gets assistance from Irving Wilson, Southwest Neighborhood District Commissioner of the Sam Houston Council of the Boy Scouts of America, to demonstrate a pressure suit and survival equipment at the annual Blue and Gold Banquet of Cub Pack 606 recently.

###

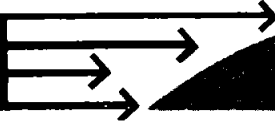


NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT
CENTER

NASA



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-45
March 5, 1963

Houston -- Manned Spacecraft Center contracting officials have begun negotiations with William J. Graham, Golden Beach, Fla., contractor, for performance of facility support services for the Center.

The proposed contract will be for operation, maintenance and repair of buildings, utilities, facilities and grounds of MSC at its Clear Lake site, Ellington Air Force Base and various leased facilities within the City of Houston. Also included will be minor modifications at each site.

The contract will cover a period of one year.

Graham was selected for the maintenance and operations contract negotiations from 20 firms making proposals after evaluation of the proposals by a source evaluation board.

The MSC Procurement and Contracts Division expects to award a contract before March 10.

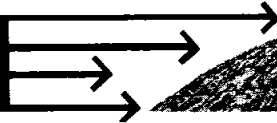
###

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT
CENTER

NASA



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-46
March 7, 1963

HOUSTON, TEXAS -- Three inmates of Huntsville State Prison have volunteered as subjects to give the Manned Spacecraft Center basic information on how the human spine reacts to a seat-directed force similar to what an astronaut receives upon landing impact.

Data in the form of X-ray photographs of volunteers' spines under gradual build-up of tension up to 120 pounds, or the first sign of discomfort, will be studied. The Crew Systems Division of MSC hopes to derive a "stress and strain" curve by projecting the results of the tests to indicate the tension failure points in the vertebra in the human spine under simulated tension loads.

These studies will show MSC designers of restraint devices how best to harness the astronaut so that he will not suffer spinal damage during landing impact.

Tests will be conducted at the M. D. Anderson hospital in Houston under the supervision of a staff radiologist with a staff orthopedist. MSC's Harris F. Scherer and John F. Rayfield of the Environmental Physiology and Crew Equipment Branches initiated the study.

Limits of the tension loads are well below 20 per cent of vertebral column failures, Scherer explained. "Circus performers, especially 'catchers' on high trapeze acts, take higher loads during performances several times a day. Tests at medical schools show that it takes a force weight of approximately 400-500 pounds to actually separate the ligaments of the vertebra."

The subject will be placed face-up on a table in a mockup of an astronaut couch to approximate thigh-torso and thigh-calf angle. A lap belt of standard aircraft configuration will hold him in the couch while a weight hanging over the edge of the table and attached to a chin strap by cord "pulls" the spine into tension. With each additional build-up weight, an X-ray photograph is made. All due safety precautions are taken, and a doctor is present during all testing. Also scheduled into the study are periodic checkups of the volunteers' vertebral column up to several months after the tests.

Another position for tests of spinal column tension is to up-end the subject in the couch configuration. Held by the lap belt, the subject's spine is photographed (by X-ray) to record one-gravity pull in the hip-over-head position.

The studies will be completed by the end of April.

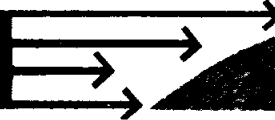


NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT
CENTER

NASA



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-P48
March 11, 1963

HOUSTON, TEXAS -- A top manager of financial matters has been added to the management roster of the Manned Spacecraft Center. He is Joseph A. Kratovil, named Chief of the Financial Management Division in late February.

Kratovil fills the position left vacant by Rex Ray, who died last October.

With North American Aviation, Inc., in its Columbus (Ohio) Operating and Autometrics Division, for 12 years, Kratovil has extensive experience in preparing and analyzing budgets, financial operating plans, cost estimates and in providing all aspects of fiscal services.

He served as the Manager of Contracts and Pricing in the Systems Division at Autometrics; Chief of Proposals and Pricing in Minute Man Systems Management Division; and in various positions of the Division of Management Control and Scheduling at Columbus.

Kratovil will serve as the financial advisor to Director Robert R. Gilruth and his staff, and will develop and operate a financial management system for the Center.

Kratovil holds a Bachelor of Science degree in mathematics from Western Reserve University and has done graduate mathematics work at the Case Institute of Technology, both in Cleveland, Ohio. He also has a Bachelor of Laws and Letters degree from Franklin University Law School in Columbus. While he was serving in the U. S. Army's 9th Armored Battalion in Europe, Kratovil attended the University of Bearritz in Southern France.

He is a member of the National Association of Accountants.

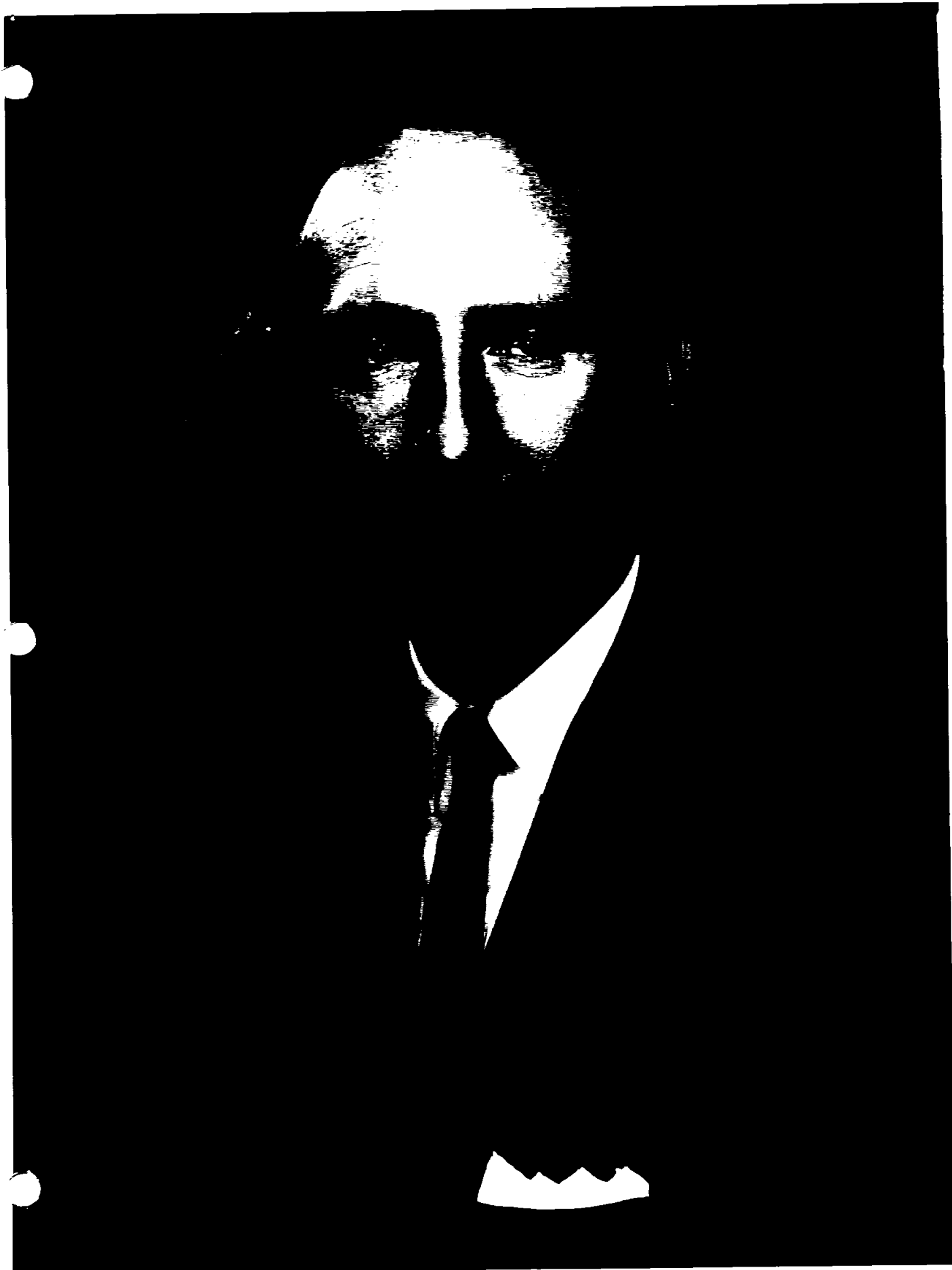
MORE

Born in Cleveland on March 26, 1925 to Mr. and Mrs. Joseph Kratovil, now residing in that Ohio city, Kratovil attended the East Technical High School from which he was graduated in 1943. He later taught mathematics and related subjects in adult education at Cleveland's Griswold Institute.

His wife, Mildred (nee Dort), and their two children -- Philip James, 12, and Sarah Ann, 8 -- reside with him in Houston, Texas.

In his spare time, Kratovil actively pursues golf and his interest in architecture.

###



NASA
S-63-1886

Approved by [Signature]

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

WALnut 8-2811
Extension 3751

MSC 63-49
March 11, 1963

CONTRACT SIGNED TO DEVELOP LUNAR
EXCURSION MODULE

The NASA signed a \$387,900,000 contract with the Grumman Aircraft Engineering Corp. of Bethpage, New York to develop the Lunar Excursion Module of the Apollo spacecraft.

The contract spells out the terms under which Grumman, on a cost-plus-fixed-fee basis will design, fabricate and deliver 9 LEM ground test vehicles and 11 LEM flight vehicles. The contract also covers operational support to be provided NASA by Grumman.

Selection of Grumman for contract negotiation to develop the LEM, a spacecraft designed to land American astronauts on the moon in this decade, was announced on November 7, 1962. (See NASA Release 62-240.) Contract negotiations were completed without issuing an interim or "letter" contract. Joseph G. Gavin, Vice-President and LEM Project Director of Grumman, and R. O. Piland, Deputy Project Manager for the LEM in the Apollo Spacecraft Project Office at the NASA Manned Spacecraft Center, Houston, Texas, headed the negotiating teams.

Grumman and its sub-contractors will produce all major sub-systems of the LEM, except for the navigation and guidance systems which will be developed for NASA by the Instrumentation Laboratory of the Massachusetts Institute of Technology and its industrial support contractors.

The LEM is one of three modules being developed for the Apollo spacecraft configuration. The other two, command module, and service module, are being developed for NASA by North

American Aviation, Inc., Downey, California.

When the LM is detached from the Apollo Command and Service Module to descend to the surface of the moon it will weigh about 12 tons. The two-man cab will be ten feet in diameter. Mounted on five skid type legs, LM will stand about 15 feet tall. The legs and descent engine will serve as a gantry and will remain on the lunar surface when the LM takes off to rejoin the mother spacecraft. LM will weigh about four tons when it leaves the moon's surface.

Technical management of the Apollo spacecraft project is the responsibility of the National Aeronautics and Space Administration's Manned Spacecraft Center, Houston, under the overall direction of the NASA Office of Manned Space Flight, Washington, D. C.

###

THE GRANMAN AIRCRAFT INC., OF BETHELEEM, NEW YORK, TODAY WAS SELECTED TO BUILD PROJECT APOLLO'S LUNAR EXCURSION MODULE - - - A SPACECRAFT IN WHICH AN AMERICAN WILL LAND ON THE MOON AND RETURN TO A MOON ORBITING MOTHER CRAFT FOR THE JOURNEY BACK TO EARTH.

IF NEGOTIATIONS ARE SUCCESSFUL GRANMAN WILL BECOME A PRIME CONTRACTOR OF THE NASA. THE CONTRACT IS WORTH AN ESTIMATED 350 MILLION DOLLARS. GRANMAN WAS ONE OF NINE COMPANIES COMPETING FOR THE DEVELOPMENT.

THE LUNAR EXCURSION MODULE REFERRED TO AS THE LEM, IS THE FINAL MAJOR SEGMENT OF THE THREE MODULE APOLLO SPACE VEHICLE AND ITS ADVANCED SATURN (C-5) BOOSTER TO BE BUILT UNDER CONTRACT.

ACCORDING TO NASA, THE GRANMAN COMPANY WOULD DESIGN, MANUFACTURE AND SUPPORT FLIGHT OPERATIONS OF THE LUNAR LANDING VEHICLE UNDER THE MANAGEMENT AND TECHNICAL DIRECTION OF THE HOUSTON MANNED SPACECRAFT CENTER.

"IN TAKING THIS PROCUREMENT ACTION," SAID NASA ADMINISTRATOR JAMES E. WEBB, "WE ARE AFFIRMING OUR FIRMATIVE DECISION OF LAST JULY, AT THAT TIME WE DECIDED TO BASE OUR MAJORITY FUTURE PLANNING, RESEARCH AND DEVELOPMENT ON THE USE OF THE ADVANCED SATURN, USING LUNAR ORBIT RENDEZVOUS AS THE PRIME MISSION MODE TO ACCOMPLISH INITIAL MANNED LUNAR FLIGHT. WE PROCEEDED TO REQUEST PROPOSALS FOR A LUNAR EXCURSION MODULE AND HAVE NOW COMPLETED THEIR EVALUATION.

IN THE SAME CASE, WE DISCOVERED THAT WE WANTED TO STUDY FURTHER SEVERAL ALTERNATIVE APPROACHES USING A CRAFT SOMEWHAT SMALLER THAN THE CURRENT APOLLO SPACECRAFT, IN BOTH DIRECT AND RENDEZVOUS FLIGHTS TO THE MOON. THOSE STUDIES, NOW COMPLETE, ALONG WITH A GREAT DEAL OF RELATED ANALYSIS AND EFFORT FROM WITHIN NASA, OTHER ELEMENTS OF THE GOVERNMENT AND INDUSTRY DURING THE IMPROVING MONTHS, MAKE US CONFIDENT THAT OUR PRESENT COURSE IS THE PROPER ONE," WEBB SAID.

"NEW KNOWLEDGE GAINED TOMORROW, NEXT MONTH, NEXT YEAR OR WHENEVER, MAY REQUIRE THAT WE MODIFY OR ALTER MAJOR PROGRAM DECISIONS LIKE THIS ONE. BUT THAT POSSIBILITY DOES NOT PERMIT US TO DELAY VITAL DECISIONS NEEDED NOW TO OBTAIN OUR NATIONAL OBJECTIVE TO MAKE THE UNITED STATES SECOND TO NONE AS A SPACE-FARING NATION."

IN RECOMMENDING THE LEM PROCUREMENT AND THE LUNAR ORBIT RENDEZVOUS APPROACH, NASA DIRECTOR OF MANNEED SPACE FLIGHT, D. BRAINARD HOLMES, POINTED OUT, "IN A LITTLE OVER A YEAR, MORE THAN A MILLION MANHOURS OF SOME SEVEN HUNDRED OUTSTANDING SCIENTISTS, ENGINEERS AND RESEARCHERS IN GOVERNMENT, INDUSTRY AND UNIVERSITIES HAVE GONE INTO THE STUDIES OF THIS MISSION. THE RESULTS OF THESE STUDIES ADDED UP TO THE CONCLUSIONS THAT LUNAR ORBIT RENDEZVOUS IS THE PREFERABLE MODE TO UNDERTAKE. IN OUR MOVING FORWARD ON THIS MISSION, WE WILL, AT THE SAME TIME, BE EXPANDING OUR NATIONAL SPACE CAPACITY AS RAPIDLY AS POSSIBLE."

UNDER PRESENT PLANS, THE APOLLO MISSION BY LUNAR ORBIT RENDEZVOUS WOULD REQUIRE A SINGLE-LAUNCH OF A 3-STAGE SYSTEM C-3 WHICH WILL HAVE A FIRST STAGE THRUST OF 7.5 MILLION POUNDS. APOLLO-SATURN WILL

STRAND SOME 335 FEET TALL AND WEIGH 6 MILLION POUNDS AT LAUNCH. ON TOP WOULD BE A FIVE-TON COMMAND MODULE HOUSING A CREW OF THREE. UNDER THE COMMAND MODULE, A SERVICE MODULE (35 TONS) TO PROVIDE MID-COURSE CORRECTION AND RETURN TO EARTH PROPULSION. BENEATH IT, ENHOUSED BY AN ADAPTER JOINING THE TOP STAGE OF THE BOOSTER, WILL RIDE THE 12-TON LEM.

ENROUTE TO AND IN ORBIT ABOUT THE MOON, THE APOLLO CREW WOULD DETACH THE LUNAR MODULE AND DOCK LEM TO THE NOSE OF THE COMMAND MODULE.

TWO CREWMEN WOULD ENTER THE CRAFT, LEAVING A THIRD MAN BEHIND IN THE MOTHER CRAFT, TO PROVIDE A BACK-UP FOR THE INTRICATE LUNAR LANDING, TAKE-OFF AND SUBSEQUENT LUNAR RENDEZVOUS AND DOCKING WITH MOTHER CRAFT.

WITH THE TWO CREWMEN BACK ON THE COMMAND MODULE, LEM WOULD BE LEFT IN LUNAR ORBIT WHILE THE COMMAND MODULE, POWERED BY THE SERVICE MODULE'S ENGINE RETURNED TO EARTH.

CURRENT ESTIMATES INDICATE LEM WILL LOOK SOMETHING LIKE THE CAB OF A TWO-MAN HELICOPTER, MEASURING 10 FEET IN DIAMETER AND STANDING ABOUT 15 FEET TALL ON ITS SKID-TYPE LEGS. THE LEGS AND TOUCHDOWN ENGINE ASSEMBLY WILL SERVE A DUAL FUNCTION OF A GANTRY FOR LUNAR TAKE-OFF, REMAINING ON THE MOON WITH THE LUNAR TOUCH-DOWN ENGINE.

THE DEVELOPMENT OF LEM'S ENGINES REPRESENTS ONE OF THE MOST DIFFICULT DEVELOPMENT ITEMS. THIS WORK WILL BE SUB-CONTRACTED BY GRUMMAN. BOTH THE LUNAR LEG-DOWN ENGINE AND THE LUNAR TAKE-OFF

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNEED SPACECRAFT CENTER

Walnut S-2811
Extension 3751

MSC 63-50
March 15, 1963

HOUSTON, TEXAS -- Norman G. Foster of the Manned Spacecraft Center will address a Junior Engineering Technical Society (JETS) conference to be held at Texas A & M College in Bryan, Texas, on March 15.

A member of the Mercury Project Office, Foster is in the Engineering Operations Office. He will give a talk outlining the history of manned space flight; slide presentations of scientific experiments flown in the upcoming Mercury one-day mission (MA-9) in mid-May, and the lunar-bound Apollo spacecraft program; and a film of Astronaut Walter Schirra's "Sigma 7" flight.

Foster, who formerly worked on the Nike missile at Western Electric for 5 years, has been with MSC since July, 1962. He holds a mechanical engineering degree from North Carolina State College, Class of '55, and is registered as a North Carolina professional engineer. He holds membership in the American Society of Mechanical Engineers (ASME), the American Society of Tool and Manufacturing Engineering (ASTME), and the Pi Tau Sigma engineering honorary society.

A resident of Houston, Texas, Foster is married and has one son.

###

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT
CENTER

NASA



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-P51
March 14, 1963

SPACE SCIENCES WORKSHOP -- The Manned Spacecraft Center and the Houston Independent School District are conducting a program designed to introduce students and teachers in the local school system to the expanding technology of manned spaceflight. The program will provide students with problem and laboratory experiments related to space explorations and, it is believed, will tend to motivate youngsters to investigate career opportunities in science and technology. The program also provides physics, math, chemistry and biology teachers from the Houston school system with 'entation and weekly training at MSC. Here Norman F. Smith, special assistant to the chief of the Spacecraft Technology Division, MSC, observes an experiment conducted by Linda Wilson at Johnston Junior High School, while Joseph Strehle, right, science supervisor for Houston secondary schools, discusses classwork with Patsy Grines.



NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT CENTER  **Houston 1, Texas**

Walnut 82811
Extension 3751

MSC 63-52
March 20, 1963

HOUSTON, TEXAS -- A beam of light capable of such high energy concentration that it can penetrate a steel plate in a fraction of a second is presently under evaluation by the Manned Spacecraft Center to determine whether it can be harnessed for space.

The device that produces the light is called LASER (after Light Amplification by Stimulated Emission of Radiation). Simply, ordinary white light at high intensity is "pumped" into an active material -- the most common is a ruby rod -- which becomes highly energized. Chromium atoms within the rod create the laser's magic. They gather energy from wide bands of wavelengths in the white light, concentrate it into a single wavelength of red light, and emit it in the form of an intense, narrow beam so powerful that it has never before been produced by man.

Not only is the energy highly concentrated into a narrow beam of red light, it is also "coherent"; that is, the contribution of each emitted light wave from a chromium atom is perfectly timed so that it is exactly "in step" with the waves of light from every other chromium atom and they burst forth in a single pulse from one end of the rod with all parts synchronized.

Application of the laser are running the gamut. Predictions are that if harnessed properly, the laser can advance the state-of-the-art in almost every field utilizing optics.

In communications, for example, a single laser beam could carry over 100 million telephone conversations. In micro-surgery, a laser beam could operate on a single cell; protein molecules, one micron in size, could be picked off the chain with a laser beam. With electronics shrinking into micro-miniaturization, a laser beam could weld the tiniest of components, such as the electrodes of semiconductors where it is important to localize the delivery of heat.

With space requirements so stringent on weight, space, accuracy and reliability, the Manned Spacecraft Center is looking to the laser for possible application to its manned space programs. MSC is particularly interested in the area of deep space communications; distance and position measurement systems (radar) that are lighter, smaller and simpler than microwave, but far more accurate; and stability and guidance systems that could sense minute deviations of a spacecraft attitude in deep space, ^{it} could activate and correct/to a millionth-of-an-inch over a 50 million mile range.

Using ultra-narrow beams, a laser device could penetrate these fantastic distances more accurately than a microwave device, and pound for pound, still emerge the superior piece of equipment from the standpoint of less weight and fewer moving parts.

To clearly define future possibilities, however, early studies need to be narrowed down to a basic comparison of the laser to the microwave. MSC, already thinking ahead, has initiated a comparison study with Hughes Aircraft Company to determine the feasibility of using an optical communication system (laser) in deep space.

The study, which will outline the design of an ultimate deep space communication system, will investigate three cases: beaming the laser between the spacecraft and the earth; between the spacecraft and an earth-orbiting satellite, then relaying to earth by microwave; and beaming the laser between a spacecraft and a lunar-based laser station, then relaying the signal to earth by microwave.

First report of the study shows an interesting comparison of the two systems utilizing the common denominator of "maximum amount of information transmitted per pound of equipment payload at selected frequencies" or how much information can be transmitted over how much weight it takes to make the transmission. At this point, the laser is winning out in performance and poundage.

The laser is greatly handicapped within the atmosphere by fog, dust, and other visible obstructions. In space, however, where there is no atmosphere to limit its beam, the laser can perform without reservation, and by directing a very narrow beam over great distances the laser offers the "fine tuning" lost in the broad beam of microwave. Power, the lifeblood of the laser, could be absorbed from the sun directly acting as the "pumping source".

A continuous-wave laser system could "carry" a fantastic amount of information on its beam, and since present microwave system frequency carriers are limited in the amount of telemetered information they can bring back, the higher laser frequencies look especially promising. The expanded area of higher frequencies available using the laser for transmitting information is many times broader than what is available on microwave.

Several projects have been planned by MSC's Instrumentation and Electronics Systems Division in their laser study program, the first of which is in the form of an experiment aboard a future manned spacecraft. A small hand-carried voice-modulated gallium arsenide laser transmitter will be pointed to a flare on earth by the astronaut in the spacecraft, and, upon command, a 30-second message will be beamed to the flare-marked ground receiver.

Another project, being conducted jointly by the Lincoln Laboratory and IESD, will study and develop an optical radar with possibility for use in later versions of the

lunar excursion module of the Apollo spacecraft. Presumably it could replace a number of microwave systems now proposed for the Apollo mission amounting to a weight-saving of about 100 pounds.

A gas laser of continuous-wave operation to arrive soon at MSC will be used to study the transmission of voice communications. Studies to "receive" voice communications transmitted by a laser may be initiated as a result of the Hughes feasibility study.

In separate laboratory studies a pulsed ruby laser is currently being used in studies on "attenuation" of its beam through rocket exhaust or through similar laboratory high temperature phenomena known as plasmas. Direct application would be to a ranging device, or altimeter aboard a later generation Lunar Excursion Module (LEM) which could beam the laser directly downward through the ion sheath of the LEM's rocket exhaust to "feel" out the lunar surface for a safe descent.

Looking beyond the present and immediate future, engineers foresee a laser in an earth-orbiting satellite used as a navigation "fix" by a spacecraft returning from a deep space mission. Others see an ECHO-type satellite used as reflector of a laser guidance beam by a passing spaceship.

Mars-bound astronauts could be supplied with instantaneous information on altitude and rate of descent from laser beacons dropped earlier by unmanned probes. Three beacons at some distance from one another, forming a triangle, could reflect the laser beam from a descending spacecraft without signal interruption by rocket blast, pinpointing the exact spot on landing.

Studies by MSC's Instrumentation and Electronics Division will screen out the plausible from the far-fetched applications of the laser. Parallel state-of-the-art development of components, component performance and transmission difficulties will

affect the "glamorous" laser applications. Some ideas may have to be entirely abandoned when a closer investigation is made of related equipment development.

The laser enjoys the popularity today that the transistor enjoyed a few years ago, and as with the transistor, optimistic engineers and scientists are discovering an endless variety of tasks for the laser to fulfill. As one scientist stated: "...at the height of transistor appeal, engineers were placing transistors everywhere.. now they're taking them out of places where they should not have been in the first place..."


Only careful screening and clever planning will prevent the application of the laser where it is "non-applicable".

NASA
S-63-1398



NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT CENTER  **Houston**
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-52
March 19, 1963

HOUSTON -- The Manned Spacecraft Center has received delivery from Lear Siegler, Inc., of a slow scan television camera system and receiving equipment intended for use in the forthcoming Project Mercury spaceflight of Astronaut L. Gordon Cooper.

Produced by LSI's Electronic Instrumentation Division in Anaheim, California, the equipment may be employed to transmit the first TV photos of an American space flight. The Mercury launching is scheduled for mid-May, 1963.

A rugged eight pound camera, similar to the one that transmitted the spectacular photos of the Echo Balloon in 1962, may be installed in the Mercury spacecraft. The camera would normally be focused on the astronaut but could be hand held and focused on other objects or to pick up the view outside the spacecraft.

The ground support equipment, which will be installed at Cape Canaveral and two other locations, will receive the slow scan TV pictures. The camera will operate one picture every two seconds which will be transmitted to the ground station over WRH RF communications link. The camera and ground support equipment were produced under contracts awarded to LSI by NASA.

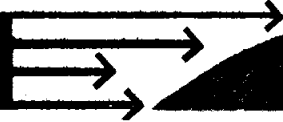
###

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT
CENTER

NASA



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-54
March 20, 1963

HOUSTON, TEXAS -- Colonel John H. Glenn, Jr., the first U. S. astronaut to orbit the earth, has been named the recipient of the 1963 Robert H. Goddard trophy.

The highly-coveted award of the National Rocket Club is given annually at the Robert H. Goddard Memorial Dinner in commemoration of the "greatest achievement during the preceding year to advance missile, rocket and space flight programs."

Lyndon B. Johnson, Vice President of the United States, will be the principal speaker at the National Rocket Club event, which will be held at Washington, D.C.'s Craton-Park Hotel on March 22.

Former winners of the Goddard trophy are Dr. Robert R. Gilruth, Director of the Manned Spacecraft Center, who received the trophy in 1962, and Dr. Wernher Von Braun, named for the award in 1958.

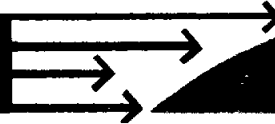
###

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNNED SPACECRAFT
CENTER

NASA



Houston
1, Texas

Walnut 82811
Extension 3751

MSC 63-55
March 21, 1963

HOUSTON, TEXAS -- Two U. S. Weather Bureau meteorologists have become Manned Spacecraft Center's spaceflight weather advisory group to provide complete weather information to space flight planners on a full-time consulting basis.

Alan N. Sanderson and Roger K. Carter comprise the new Spaceflight Meteorology Group which will funnel world-wide weather information to flight operations personnel. Between flights, the group will draw up chronological charts (such as wind-and-wave frequency in water recovery areas), weather survey summaries and other climatological information to assist in the planning of manned space missions.

The National Meteorological Center at Suitland, Maryland, assigned to MSC permanently, has similar units at Miami and Cape Canaveral, Florida, also supporting the manned space flight mission. The headquarters office supplies world-wide weather information, while the Florida bureaus report on local weather and make forecasts for use by the Launch Operations Center at Cape Canaveral, prior to and during MSC flights.

The two-man weather team at Houston will have its office on the third floor of the Integrated Mission Control Center (IMCC) when it is completed, adjacent to one of the two mission control rooms.

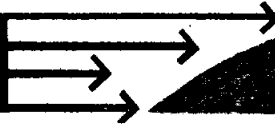
#

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANAGED SPACECRAFT
CENTER

NASA



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-56
March 22, 1963

HOUSTON, TEXAS -- A bride of the future need not worry about lack of cooking skills. According to a space researcher on food to be eaten in space, all she will need to know is how to boil water.

This is not a conspiracy to deny mothers-in-law their favorite pastime; nor is it meant to encourage new husbands into thinking they will be eating better meals after the honeymoon has eclipsed.

Future food for long space trips, as to Mars, may be a combination of synthetic ingredients and freeze-dehydrated foods. These could be in the form of tablets, powders bite-size morsels to conserve space. Reconstituted with a little bit of water, delicious, eye-appealing foods could grace the astronaut's console.

Other plausible ideas consider the production of edibles from waste products in what is technically considered a "closed ecological system". Wastes, including expired air, would be broken down to basic chemicals such as carbon dioxide and water, then to a further breakdown of hydrogen, carbon and oxygen -- then recombined in proper amounts to make carbohydrates, and amino acids. Still another method would be to carry along algae which absorbs carbon dioxide and releases oxygen for spacecraft occupants to breathe. Astronauts could eat algae to supply their bodies with valuable nutrients.

"On trips to a distant planet which would take a year or longer, a closed system of some sort will have to be considered," an MSC researcher explained.

As manned space flights progress in duration such as the upcoming MA-9 flight extension to one day in space, foods aboard the spacecraft no longer become an "experiment". They become fuel for the astronaut. He needs to eat to keep up his energy to operate as a vital "system" within the spacecraft. His food becomes a part of his life-sustaining equipment.

Edward Michel and Robert A. Nanz of the Manned Spacecraft Center's Crew Systems Division, in a sense, are space nutritionists. As the calorie-counters for the astronauts, they concern themselves with problems peculiar to the space environment. For example, currently they are evaluating a mouthpiece which will reclose the container automatically to prevent spillage. Nothing could be messier in a weightless environment than to have pea soup turn into a green sea should the astronaut accidentally knock the container against a cabin wall.

Keeping cookies from crumbling, the problem Astronaut Carpenter complained about when cookie crumbs floated around his cabin, could be resolved with a new packaging technique. Now a neatly packaged oatmeal cookie can be popped into the mouth, wrapper and all. The wrapper is made of methyl cellulose and melts instantly in his mouth, yet, looks and feels like an ordinary cellophane candy wrapper. Methyl cellulose is a synthetic gum used in many of the new commercial synthetic products, such as whipped toppings for desserts.

Tubes of pureed foods are being replaced with freeze-dehydrated foods for astronaut diets. The method of preparation -- first frozen, then dehydrated -- is not new, but packaging the foods for space is new. Freeze-dehydrated foods, already commercially available for campers, preserve much of the texture, taste, color and flavor of the foods being processed. There are soups available on grocery shelves which have been freeze-dehydrated.

Housewives are not unique in their concern about "what to do with the leftovers?" In the spacecraft, leftover food must be treated quickly or it could upset the astronaut's balanced life-supporting atmosphere. To cope with uneaten food, the astronaut could drop a disinfectant tablet into the food to control spoilage.

Astronauts are often invited to the laboratory of Michel and Nanz for lunch to taste-test new items in the menu, or to evaluate a new container or packaging technique. As the choices on the menu enlarge, astronauts on future flights can "special order" their favorite foods. Present favorites are creamed chicken, strawberries and fruit cake cubes.

###

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT
CENTER

NASA



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-P57
March 20, 1963

HOUSTON TEXAS -- The "pulse" of future Manned Spacecraft Center multiple crew space flights, such as the two-man Gemini and the lunar-bound Apollo missions, will be monitored in the \$50 million Integrated Mission Control Center, partly shown in this cutaway model of its second floor.

Complicated internal electronic flight information and control display equipment will be assembled by Philco Corporation, with the exception of the real-time computer complex, which will be built, installed and maintained by International Business Machines.

All flights will be controlled and monitored from the center room, showing 15 flight controller positions facing a 20-foot wide display supplemented by eye-level closed-circuit TV consoles. This central room will be supported by Flight Dynamics, Life Support, Vehicle Systems, Network Support, and Operations and Procedures staff rooms at its left. Duplicate main control and staff support rooms will be located in the third floor. Display equipment is housed behind the large projection screen. At the opposite end of the main room is a visitors gallery.

To the right of the main control room are conference rooms; a simulation area with dynamic and static "remote sites" for training, equipment checkout, procedures and mission rules development; building utilities equipment room; display maintenance room; and unassigned rooms.

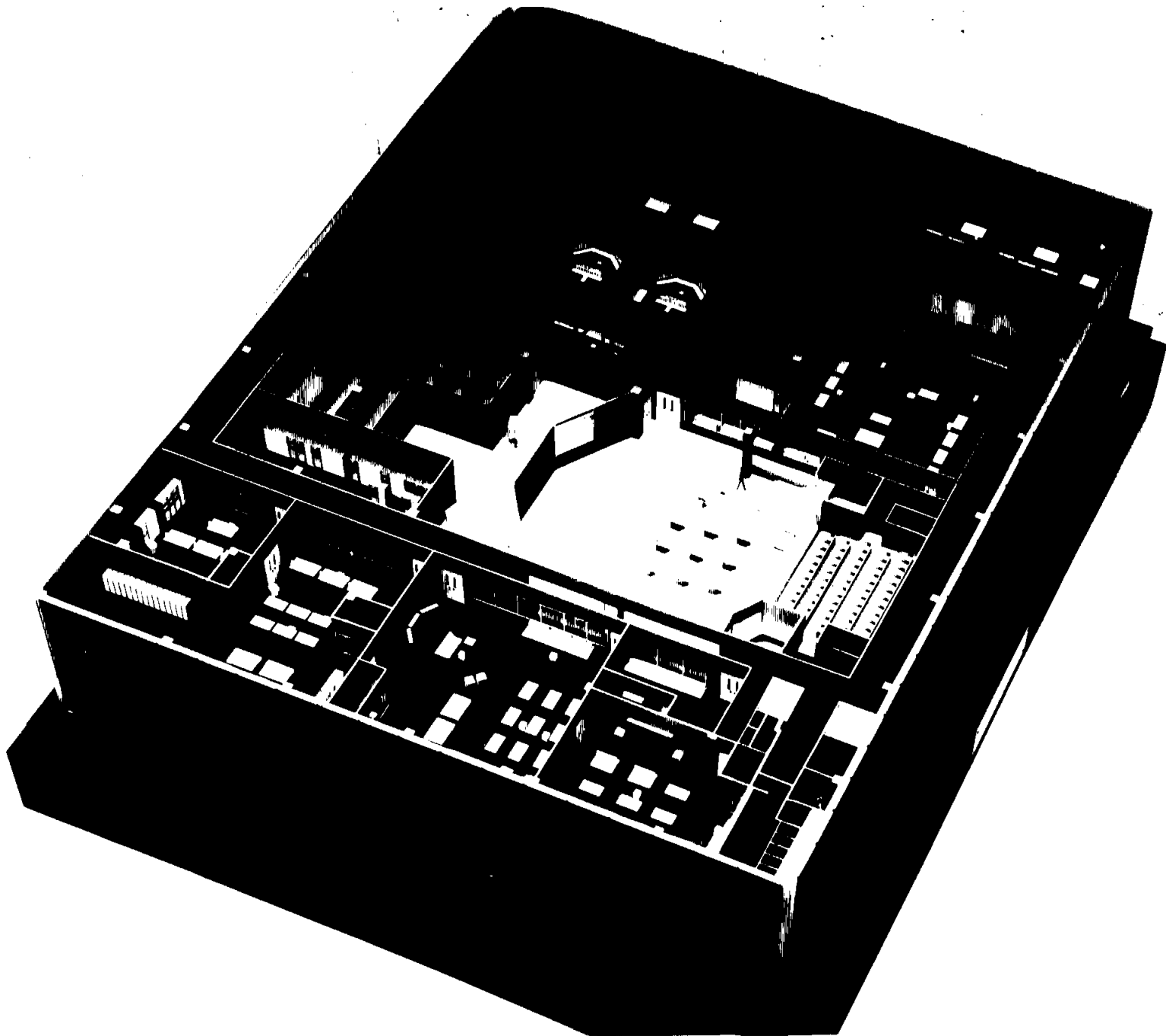
33-13

First floor of the IMCC will house the computer complex; operational and instrumentation facilities for telemetry, ground station and tracking radar operations; communications equipment; and closed-circuit TV -- one of the main methods of display throughout the IMCC.

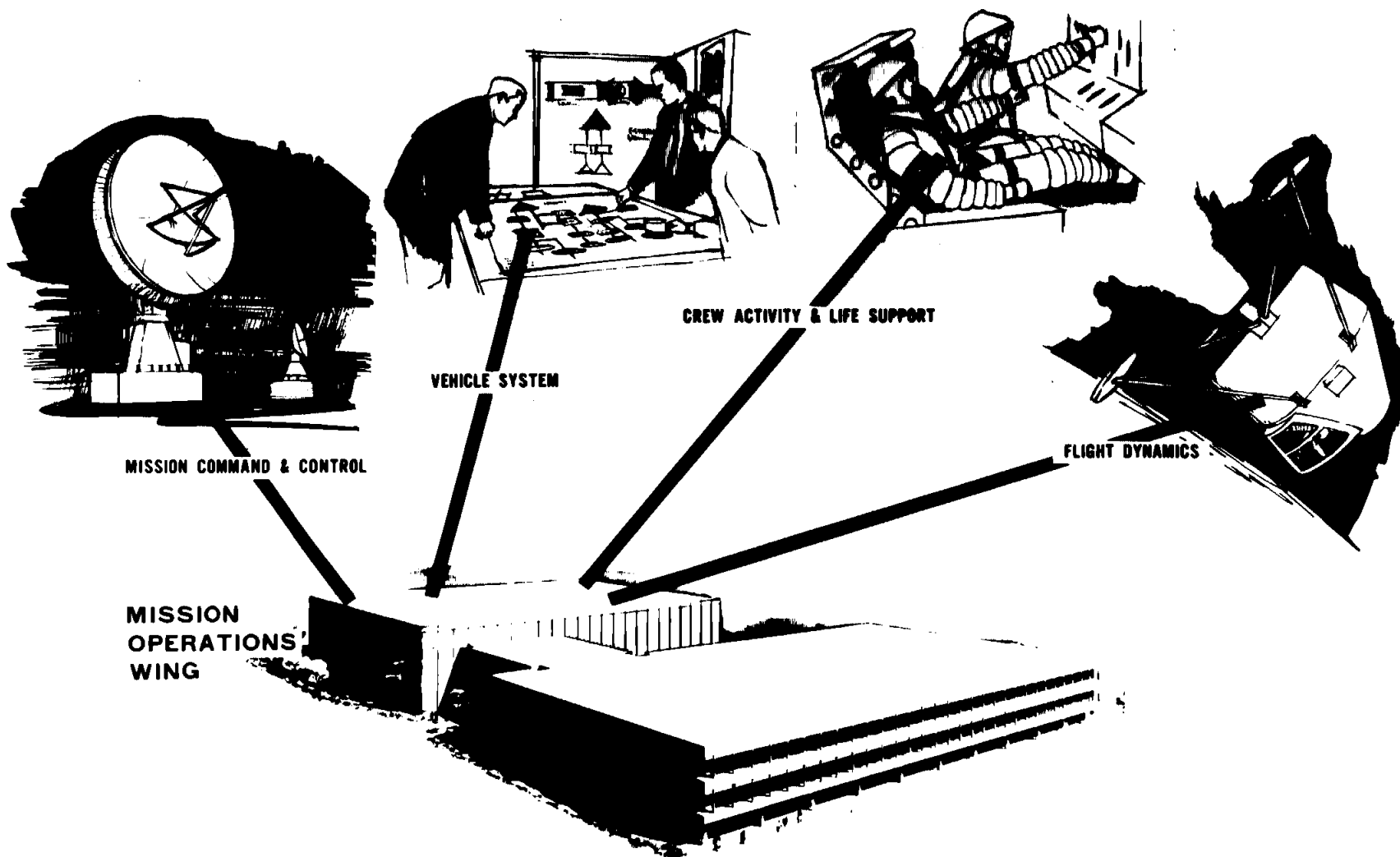
Since Gemini and Apollo missions schedules overlap, duplication of main control and staff support rooms will allow preparations for one flight while another is taking place. Two flights, however, will never be run at the same time. In addition to these rooms, the third floor will accommodate the meteorological bureau, and recovery control and communications rooms.

###

NASA
7-62-1273




4 PRINCIPAL PHASES OF MANNED MISSION OPERATION



INTEGRATED MISSION CONTROL CENTER
MANNED SPACECRAFT CENTER
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
CLEAR LAKE, HARRIS COUNTY TEXAS

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT CENTER  Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-58
March 20, 1963

HOUSTON, TEXAS -- A design for a universal crash helmet which can be worn by military pilots at various altitudes, has won U.S. Navy approval and an incentive award for a Manned Spacecraft Center engineer.

James Correale of MSC's Crew Systems Division has accepted a \$50 incentive awards check, under a Navy-sponsored program, for his design of a universal helmet. The "hard-hat" can be worn at all altitudes with a fully-pressurized suit, a non-pressurized suit, or with the Navy-type exposure suit. Formerly, each mission required separate headgear, and the U. S. Navy stocked three different mission helmets.

Additional awards will be presented to Correale when the patent for the design is granted.

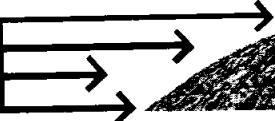
Correale has been with NASA's Manned Spacecraft Center since July, 1961. He formerly headed the Pressure Suit Branch of the Naval Air Materiel Center's Crew Equipment Laboratory in Philadelphia for 13 years. He holds several patents, some pending, on U. S. Navy pressure suit and survival equipment. A design for a water-compensated check valve for Navy exposure suits netted him an incentive award for \$200 under the Navy awards program.

Correale was graduated from Villanova University, Villanova, Pennsylvania in 1944 with a B.S. degree in mechanical engineering. He is a member of the American Rocket Society, and of the Aeromedical Space Association.

###

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

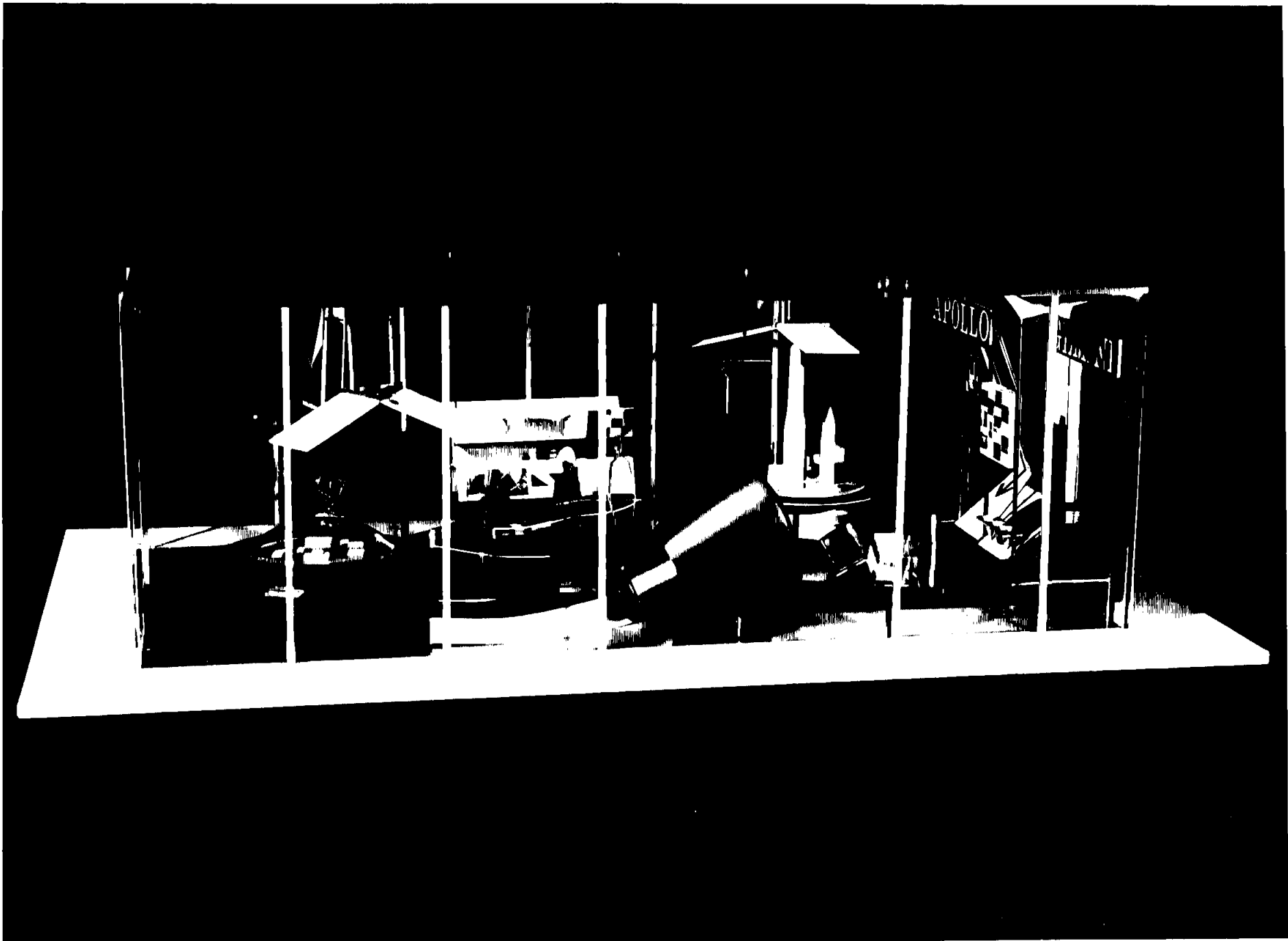
MANNED SPACECRAFT CENTER    **Houston**
1, Texas

Walnut 8-2811
Extension 3751

MSC-P59
March 20, 1963

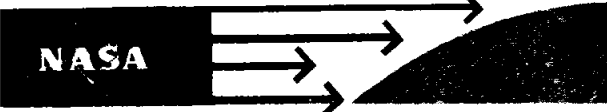
HOUSTON, TEXAS -- The Manned Spacecraft Center's permanent display, shown above in this scale model, will occupy 800 square feet of the World Trade Center lobby in downtown Houston. Designed for technical and educational groups, and for Houston visitors, the "growing" exhibit will incorporate the latest progress changes in the Mercury, Gemini and Apollo manned space flights. On permanent display will be a Mercury space suit, a Mercury spacecraft, a scale model of MSC's Clear Lake site, and exhibits detailing Gemini's two-man and Apollo's lunar-bound missions in space. The huge exhibit, to be built by Atkins and Merrill of Sudsbury, Massachusetts, will be accessible to the public on April 4.

###



NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT CENTER  Houston
1, Texas

Walnut 82811
Extension 3751

MSC 63-60
March 19, 1963

HOUSTON, TEXAS -- Dr. Robert R. Gilruth, Director of the Manned Spacecraft Center of the National Aeronautics and Space Administration, today announced assignment changes for three key officials in the Center's manned spacecraft engineering and development program.

James A. Chamberlin, manager of the Gemini Spacecraft Project, has been advanced to the newly created position of Senior Engineering Advisor to the Director.

In his new assignment, Chamberlin will provide engineering advice to the Director in all phases of spacecraft technology.

Charles W. Mathews, who has been serving as deputy assistant director of MSC for engineering and development, as well as chief of the Spacecraft Technology Division of that office, is assuming responsibilities as acting manager of Project Gemini.

Max Faget, Assistant Director for Engineering and Development, will temporarily become acting chief of the Spacecraft Technology Division, in addition to his other duties.

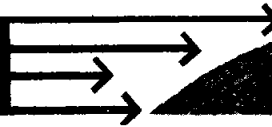
###

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNNED SPACECRAFT
CENTER

NASA



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-61
March 26, 1963

HOUSTON, TEXAS -- An important milestone in the development of the NASA Apollo environmental control system will be marked this week when first tests of the system begin in Garrett-AiResearch Los Angeles.

System development testing of the ECS will continue for approximately six months.

According to Paul C. Scofield, AiResearch Apollo program manager, the test profile will include simulating prelaunch, ascent, orbital and re-entry pressure conditions on an operating environmental control system. Function of the ECS is to provide life supporting atmosphere in the command module of the Apollo spacecraft.

Development testing of the ECS will be conducted in a new laboratory facility built especially for the Apollo program. AiResearch is developing the ECS under contract to North American Aviation Space and Information Systems Division, prime contractor to the Manned Spacecraft Center for the NASA Apollo vehicle.

The new laboratory is composed of a programmed altitude chamber, and an array of auxiliary test support equipment such as heat exchangers, vacuum pumps and refrigeration units.

A unique feature of the test lab is its data acquisition system, one of the most comprehensive ever devised for development of an ECS.

More than 200 data points (temperature and pressure) will be automatically recorded on the new data acquisition system (DAS). ECS sensor data recorded on magnetic tape by the DAS will be analyzed by an IEM 7070 computer to minimize engineering data reduction time. This rapid analysis permits design engineers to correct problem areas on a

continuing basis since a complete test run is analyzed in less than one day. Previously, weeks of calculations would have been necessary to determine test results.

Visual monitoring and recording of fluid temperatures, pressures, and flows are made during each test run. This data assists engineers conducting the test to remotely control the ECS under test in the altitude chamber.

This also permits the test conductor to evaluate the performance and control of the entire ECS system during the test.

Prelaunch condition for the ECS is evaluated by integrating the actual test equipment checkout console into the test loop. A metabolic simulator is used to inject carbon dioxide, heat and water vapor in quantities simulating one, two or three men in the spacecraft.

Other major portions of the Apollo test equipment such as electrical, liquid and pressure component test stands are included in the new testing lab. This equipment is used to check ECS components during development testing and later to perform acceptance testing of all Apollo ECS components manufactured by AiResearch Los Angeles.

###

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT CENTER  **Houston**
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-62
March 22, 1963

HOUSTON, TEXAS -- A contract for nearly half a million dollars was awarded to the Hayes International Corporation of Birmingham, Alabama, for graphic arts services to the Manned Spacecraft Center of NASA.

The contract for \$467,310 went to the lowest qualified bidder among 23 companies submitting proposals.

The contractor plans to establish a facility in Houston which will furnish and perform all phases of graphic arts services including technical illustration, visual art, graphic slides, charts, maps and reproducibles. The term of the contract is one year.

The Support Procurement Office, under MSC's Procurement and Contracts Division, will monitor and administer the contract. MSC contracting officer is Joseph T. Davis.

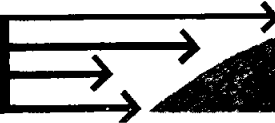
###

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT
CENTER

NASA



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-63
March 27, 1963

HOUSTON, TEXAS -- A new space suit performance device, built and designed under contract to the Manned Spacecraft Center, will be used to help evaluate space suit and spacecraft cockpit design.

A test operator's console, a physiograph and a molded couch assembly facing a subject's testing board, comprise the equipment built by the Applied Psychological Services of Wayne, Pennsylvania, under a NASA contract.

The testing equipment will also be used by crew performance engineers for evaluating and setting standards on manually operated spacecraft cockpit equipment, design of actuating switches, knobs and dials, lay-out of instruments and equipment display, and other aspects of the spacecraft interior.

The Crew Systems Division of MSC intends to perform a battery of tests to establish a set of normative standards to aid in the development of space suits.

A device called a flexometer will measure the extent an astronaut can bend his wrists, elbows, knees and other joints while wearing a space suit.

Steel arcs over the subject's chair will measure the suit-clad astronaut's reach within his immediate area. Cards, mounted on the arcs, will reveal how far he can turn his head to read an instrument placard. A form board with forms and sockets will measure his finger dexterity, palm movement and wrist action in a glove-encased hand, and will also measure "success" of a particular shape design of the "form".

The astronaut's freedom of movement in a space suit will be recorded through reaction time to operate typical controls. Along a display of rotary switches, toggle switches, and push-button switches, lights will stimulate a response and will remain lighted until the proper action is activated.

A control stick, adapted from a helicopter control design, will be used to measure the subject's coordination. He will be required to center cross-hairs and to hold the aligned position as long as he can.

A six-channel physiograph will record body temperatures at two places, galvanic skin response, breathing rate, blood pressure and heart rate, to evaluate the test subject's physical and emotional state during tests.

###

NASA
S-63-3397

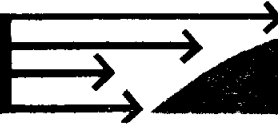


NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNNED SPACECRAFT
CENTER

NASA



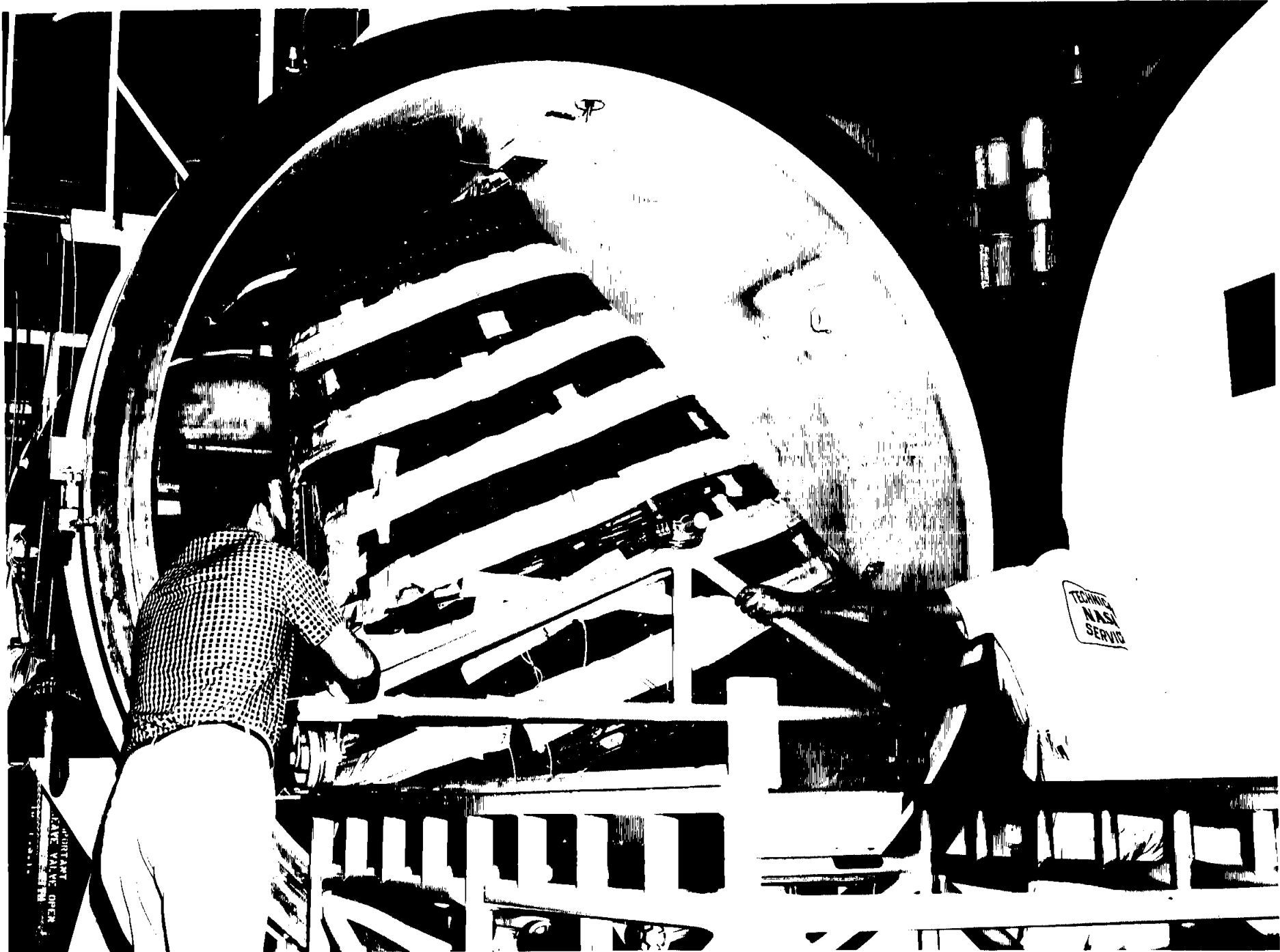
Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-P65
March 30, 1963

Placing a spacecraft in "space" is almost routine with these Manned Spacecraft Center engineers. Here, a modified production model of the Mercury spacecraft is rolled into a vacuum chamber at MSC's Crew Systems Division to test and evaluate its environmental control system (ECS). The ECS is the life-sustaining system within the spacecraft that keeps the earth-orbiting astronaut alive and alert. Although the chamber cannot relieve the pull of gravity to simulate weightlessness, it can evacuate air pressure to a level so low that, for all practical purposes, it is the environment of space. Heating pads encircling the spacecraft simulate solar heating in orbit.

NASA
S-63-3396

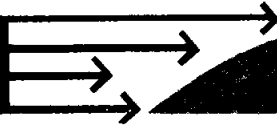


NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT
CENTER

NASA



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-66
March 27, 1963

HOUSTON, TEXAS -- A contract definitizing the terms and conditions of Philco Corporation's role in implementing the Integrated Mission Control Center at Manned Spacecraft Center's site at Clear Lake, has been signed, the National Aeronautics and Space Administration announced.

The contract amounts to \$33,797,565, including the fixed fee.

Philco will provide the "pulse" of the IMCC - all the complicated internal electronic flight information and control display equipment, with the exception of the real-time computer complex which will be built and maintained by IBM. Some associated equipment will be purchased directly by MSC.

Philco will assist MSC in maintaining and operating the IMCC for one year after acceptance is made by the Houston space center.

The IMCC at Clear Lake will take over the function performed by the Mercury Control Center at Cape Canaveral, Florida. The IMCC will monitor and control the

- more -

add 1
JC 63-66

two-man Gemini missions in which U.S. astronauts will rendezvous and dock in space, and, on a later mission, spend two weeks in space. It will also control Apollo flights which will ultimately land a U. S. astronaut on the moon.

The work by Philco will be conducted at four locations: in Houston; at the Western Development Laboratory, Palo Alto, California; at the Philco Communications and Electronics Division, Philadelphia, Pa.; and the Aeronutronics Division of Ford Motor Co., Newport Beach, California.

Philco was selected from seven qualified bidders.

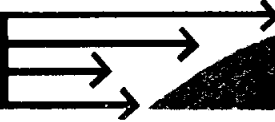
###

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNEDED SPACECRAFT
CENTER

NASA



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-67
April 4, 1963

HOUSTON, TEXAS -- A balloon shaped like a child's spinning top is being designed as a safety device for astronauts during the first and last stages of NASA's Project Gemini flights, Manned Spacecraft Center has announced.

The drag balloon, called Ballute, is being built by Goodyear Aircraft Corporation of Akron, Ohio, under a contract from Weber Aircraft Corporation, Burbank, California, subcontractor for the Gemini ejection seat escape system. McDonnell Aircraft of St. Louis is prime contractor for the spacecraft, under the technical direction of NASA's Manned Spacecraft Center.

Ballute (BALloon-parachUTE), a system developed by GAC during 20 test programs in the past four years, would be used if astronauts were forced to use their ejection seats, the planned mode of escape for altitudes below 70,000 feet.

The inflatable rubberized fabric structure would stabilize and slow their fall until conventional parachutes could be deployed at the lower altitude, GAC engineers said.

- more -

add 1
JC 63-67

Gemini is a National Aeronautics and Space Administration long duration orbital rendezvous spacecraft which will return to land at a pre-selected landing point in the United States.

During the Gemini flight, American scientists will study rendezvous docking techniques and the effects of long periods of weightlessness upon astronauts.

Because free fall descent above 35,000 feet could result in a tumbling motion greater than man can stand, Goodyear Aircraft engineers are developing the stabilizing device as a precautionary measure.

Ballute will be packaged in a deflated condition in the ejection seat during flight. Soon after ejection from the spacecraft, the astronauts would separate from their seats and the drag balloon would inflate within a fraction of a second and trail above them.

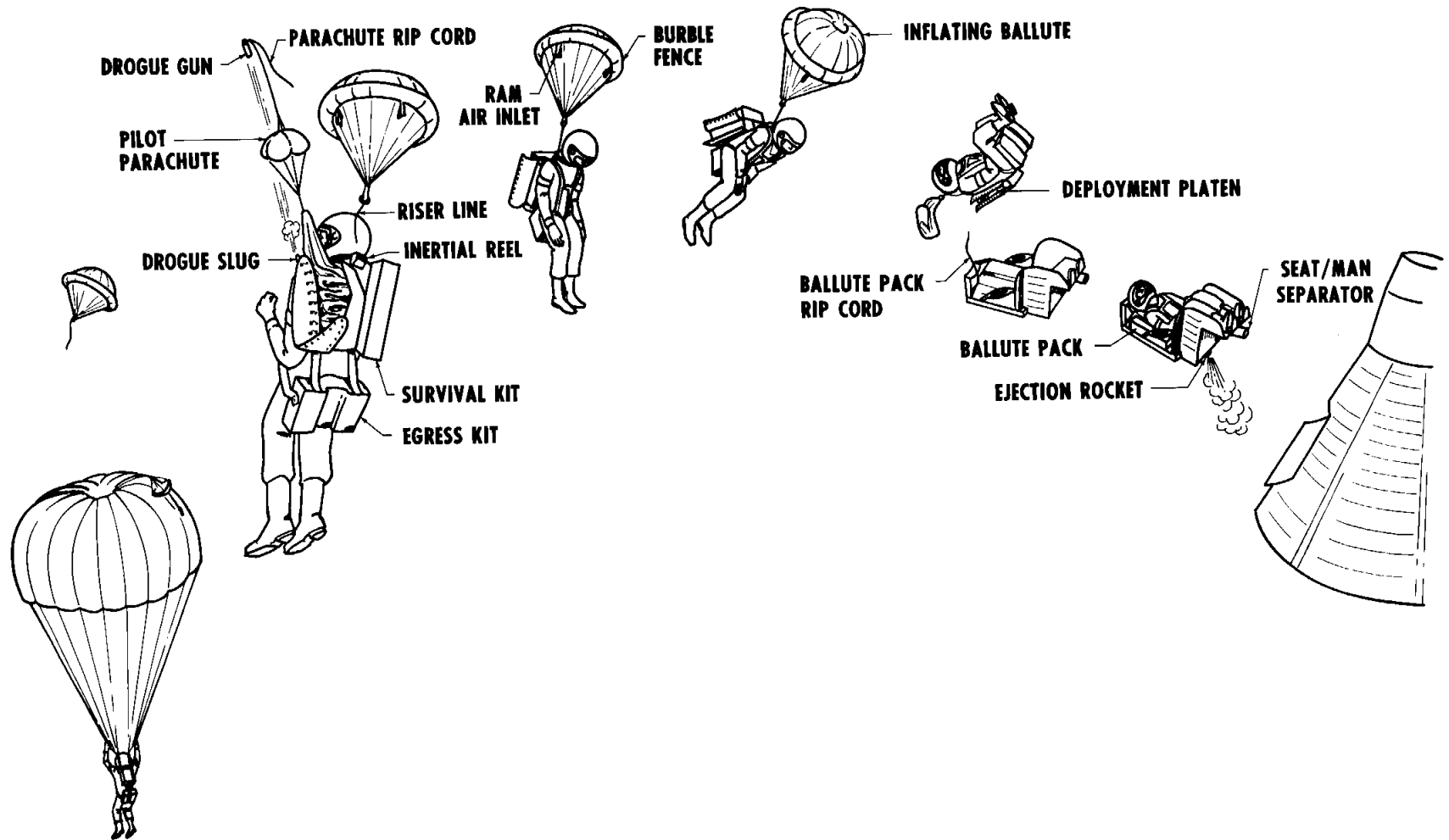
The inflated Ballute is expected to be about 18 inches in diameter and two feet long, according to preliminary GAC designs.

During previous tests, the drag device has successfully stabilized the descent of payload weighing as much as 500 pounds. The system has been proven at speeds up to 10 times that of sound.

GAC also has suggested use of Ballute for recovery of booster assemblies, nose cones and research vehicles re-entering the earth's atmosphere.

###

BALLUTE DEPLOYMENT

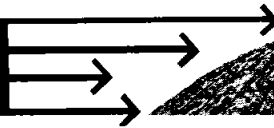


NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT
CENTER

NASA



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-68
March 29, 1963

HOUSTON, TEXAS -- Thirty semi-finalists in the Manned Spacecraft Center's space-oriented contest among Houston and Harris county high school students have been selected to enter final competition on March 30 at San Jacinto High School.

The semi-finalists (see attached list) were selected from more than 5,000 entries, representing 90 junior and senior high schools. Fourteen of the semi-finalists are girls.

Final winners will be announced Saturday when four winners each will be selected in two categories of the space science division. Judged will be the best technical paper on space sciences or manned space exploration, and best editorial paper on the theme "Why are we going to the moon?" Four final technical papers, two each from the junior and senior high school entries; and four editorial, two from each high school division, will be named winners. A certificate, plaque, and pin will be awarded to the winners with opportunity to meet an astronaut in a special tour and briefing at the Manned Spacecraft Center. Winners will also be MSC guests at the opening of its World Trade Center exhibit in downtown Houston on April 4.

Add 1
MSC 63-68

A committee of MSC officials, members of the Chamber of Commerce and the Houston Engineering Council, and representatives of educational institutions will make the winning selections.

Semi-finalists will read their papers this Saturday (March 30) at the third annual Houston Seminar of High School Science program at San Jacinto High School. The program is sponsored by the Houston Council of Science Clubs in cooperation with the Baylor University College of Medicine and the Engineers Council of Houston.

Preliminary judging which led to the selection of the semi-finalists was conducted at each participating high school.

###

CONTEST SEMI-FINALISTS

EDITORIAL (Junior High School)

Linda Fields
Southmore Junior High School
Pasadena

John Taylor
Black Junior High School
Houston

Mathew Vallie
G. W. Carver Junior High School
Aldine Ind. Sch Dist

Karen Lee Johnson
Long Junior High School
Houston

Jane Stegall
Hogg Junior High School
Houston

Cathy Noland
Pershing High School
Houston

Alex Wong Jr.
Marshall Junior High School
Houston

Mike Smith
Deady Junior High School
Houston

Judy Franklin
Landrum Junior High School
Spring Branch

Dawn Lock
George Washington Junior High School
Houston

EDITORIAL (senior High School)

Suzanne Batchelor
Mt. Carmel Senior High School

Theola Marie Emerson
Booker T. Washington Junior-
Senior High School
Houston

Lee Avery
Sam Houston Senior High School
Houston

Mickey Guiberteau
Davis Senior High School
Houston

Mike Rosenthal
Lamar Senior High School
Houston

Lynn Berry *(Berry)*
Aldine Senior High School
Aldine

CONTEST SEMI-FINALISTS

TECHNICAL PAPERS (Junior High School)

Maurice Joseph Sylvester
Attucks Junior High School
Houston

Kenneth Kleeman
Jackson Junior High School
Houston

Carol Orr
Landrum Junior High School
Spring Branch

Davey Spencer Thornton
Spring Branch Junior High School
Spring Branch

Glen Rosenbaum
Cullen Junior High School
Houston

TECHNICAL PAPERS (Senior High School)

Jim Thompson
Waltrip Senior High
Houston

William Voelkle
Sam Houston Senior High School
Houston

Donald W. Callaway
Milby Senior High School
Houston

Yaren Ceyer
Robert E. Lee Senior High School
Houston

Debbie Copeland
Westbury Senior High School
Houston

Barbara Manroe
Bellaire Senior High School
Houston

Jill Farren
Memorial Senior High School
Spring Branch

Carol Hartric
Robert E. Lee Senior High
Goose Creek Ind. Sch Dist.

Wayne Toups
Deer Park Senior High School
Deer Park

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT CENTER  Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC-63-69
March 31, 1963

HOUSTON, TEXAS -- Approximately 100 education, business, government and civic leaders of Houston and the state have been invited to attend the April 4 opening ceremony for the permanent Manned Spacecraft Center display which has been installed in the lobby of the World Trades Center in Houston.

Participating in the 10 a. m. ceremonies will be Mayor Lewis Cutrer; President Edward Fay of the World Trade Center Association; and Paul E. Purser, special assistant to the Director of MSC. The program will be conducted in the WTC auditorium adjacent to the exhibit room.

The "ribbon-cutting" will precede the opening of the exhibit to public view at noon. The display, featuring representative objects of the Manned Spacecraft Center's space flight programs in an 800-square foot area, will be open to the public seven days a week initially.

- More -

Add 1
MSC-63-69

Designed and constructed for MSC by Atkins and Merrill, a contracting firm specializing in exhibit construction, the display is arranged so that it may be changed periodically to keep pace with technical advances in the Mercury, Gemini and Apollo spacecraft projects being conducted by MSC.

Contained in the display will be a Mercury spacecraft, a pressure suit, a diorama of the future MSC permanent site at Clear Lake and other graphic and model displays.

The primary aim of the exhibit is educational rather than entertainment and is directed toward educational, technical and foreign groups in particular.

#####

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNNED SPACECRAFT
CENTER

NASA



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-70
April 2-3, 1963

HOUSTON, TEXAS -- Space Surgeon Charles A. Berry of the Manned Spacecraft Center's Medical Operations Office will speak on "The Challenge of Aerospace Medicine" to 500 students at New York University Medical Center on Saturday, April 6.

The one-day session, sponsored by the New York County Medical Society, will be held in the Alumni Hall Auditorium of the University.

Dr. Berry, who has been with MSC since July, 1962, has served as aeromedical monitor for Project Mercury's manned space flights from their inception. He later became prime monitor at the Canary Island and Bermuda sites, and trained other medical monitors at these locations.

Dr. Berry received his Doctor of Medicine degree in 1947 from the University of California Medical School, San Francisco, serving his internship at the San Francisco City and County hospital. After three years of general practice at Indio and Coachella, California, he entered the U.S.A.F.'s Aviation Medicine residency training program, later serving as Base Flight Surgeon and Deputy Command Surgeon in the Caribbean Air Command at Albrook Air Force Base, Canal Zone.

Add 1
MSC 63-70

He was assigned as Assistant Chief of the Department of Aviation Medicine at the School of Aviation Medicine at Randolph Air Force Base, Texas, and, two years later, became Chief of the Department of Flight Medicine. In September of 1959, he reported for duty in the Aerospace Medicine Division, Office of the Surgeon General, USAF.

He holds the Arnold D. Tuttle award for articles on original research published in Aerospace Medicine in 1959 and 1960. In 1962, he was awarded the USAF certificate of Achievement in recognition of outstanding qualifications in the specialty of Aviation Medicine. He has written or co-authored nearly 30 aerospace medical papers and several chapters of book-length works.

Dr. Berry is a member of the American Medical Association, the American Academy of General Practice, and the Association of Military Surgeons. He is a Fellow of the Aerospace Medical Association, a member of the Space Medicine Branch of that Association, and a member of the Committee on Aviation Health and Safety. He is Fellow of the American College of Preventive Medicine and a member of the Council on Education of the General Public of the American College of Preventive Medicine. He is a member of Delta Omega (Honorary Public Health Society) and Nu Sigma Nu, and is an Associate Fellow of the American College of Physicians. He is Executive Secretary on the Board of Governors of the Society of USAF Flight Surgeons and Vice-President of the Society.

###

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNNED SPACECRAFT CENTER  Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-71
April 2, 1963

NASA SIGNS WITH McDONNELL AIRCRAFT CORPORATION FOR GEMINI SPACECRAFT

HOUSTON, TEXAS -- The NASA has signed a 456.6 million prime contract for Project Gemini spacecraft with McDonnell Aircraft Corporation, St. Louis, Missouri.

Development of the two-man Gemini spacecraft began in December 1961 under technical direction of Manned Spacecraft Center, Houston, Texas with a preliminary "letter" contract which amounted to 145 million and is included in the 456.6 million total.

Manned Gemini missions to begin in 1964 will develop docking and rendezvous techniques in space with the previously launched Agena vehicle in preparation for the Apollo lunar mission which will land U. S. astronauts on the moon. Gemini also will provide experience in manned space flight for as long as two weeks.

Under the contract the firm will provide 13 flight-rated spacecraft. Twelve are to be used for spaceflights and the 13th is to undergo ground testing. McDonnell also will provide 16 Gemini-Titan II adapter modules and 9 Agena target vehicle docking adapters.

- more -

Other equipment to be furnished includes:

- Two mission simulator trainers, one to be located at Cape Canaveral, Florida and the other at the Manned Spacecraft Center, Houston. Gemini astronauts will "fly" complete simulated missions in the trainer spacecraft.
- One docking simulator trainer to be located at MSC Houston for Astronaut docking maneuver practice.
- Five boilerplate spacecraft for parachute ejection seat and landing impact tests.
- Three "static articles", spacecraft of flight rated structure for ground test evaluation of structural loading through vibration and impact tests.

The contract also specifies terms under which McDonnell is to assist in providing spacecraft pre-launch checkout, servicing, fueling, post-flight spacecraft services, trainer maintenance, test programs, spare parts and mission engineering analysis.

More than 50 percent of the contract dollars will be subcontracted by McDonnell to approximately 1500 subcontractors and suppliers throughout the United States.

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT CENTER  Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-72
April 3, 1963

HOUSTON, TEXAS -- Dr. Robert R. Gilruth, Director of NASA's Manned Spacecraft Center, today accepted the resignation of Charles W. Frick, Manager of Project Apollo, the manned lunar landing spacecraft program.

In submitting his resignation, Frick expressed great regrets at leaving MSC and his work on the Apollo program. He said that pressing personal reasons dictated that he return to the aerospace industry.

Frick agreed, however, to stay on at the space center in the role of consultant to the Apollo program until April 25.

"It is with reluctance that I accept this resignation," Dr. Gilruth stated. "Charles Frick's outstanding management and engineering capabilities have been of major importance in organizing the Apollo project, and in the many successes so far achieved in this program."

- more -

id 1
MSC 63-72

Gilruth also announced that he has named Robert O. Piland to be acting manager of the Apollo program, with the additional responsibility as Chief, Command and Service Module. James Decker was selected to replace Piland as Chief, Lunar Excursion Module.

Frick had joined MSC as Manager of the Apollo program in February, 1962, after serving on a consultant basis to the program since December 1961. He was employed at that time by General Dynamics Corporation.

Without revealing his future career plans, Frick indicated that he will return to the West Coast to join his wife, June, and daughters, Barbara and Kathleen at the family residence in La Jolla, California. A third daughter, Ann, attends Santa Clara University in California.

###

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT
CENTER

NASA



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-73
April 5, 1963

HOUSTON, TEXAS -- The William J. Graham and Son Company of Golden Beach, Florida, as been awarded a cost-plus-fixed-fee contract, estimated at \$800,000, to maintain and operate the Manned Spacecraft Center's buildings, facilities, utilities and grounds.

The work under contract will run for one year and will include support services at MSC's Clear Lake site, Ellington Air Force Base and various leased facilities in Houston. Work is expected to begin at once with the establishment of Graham's office at Ellington.

The Graham company was selected by a source evaluation board from more than 20 companies offering their services to MSC. Negotiations with the Graham company began on March 5.

The contract will be administered and monitored by the Center Facilities and Construction Procurement Branch of MSC's Procurement and Contracts Division.

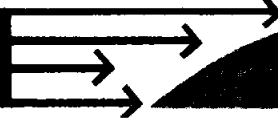
###

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT
CENTER

NASA



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-74
April 10, 1963

HOUSTON, TEXAS -- Two Manned Spacecraft Center engineers will present a co-authored paper to the Advisory Group of Aeronautical Research and Development (AGARD) of the North Atlantic Treaty Organization in Turin, Italy on April 16-18.

The paper, entitled "Earth Landing Systems for Manned Spacecraft" will explain the guidelines used by MSC in the selection of the landing systems for Mercury, the two-man Gemini, and the lunar-bound, three-man Apollo projects to the 22nd meeting of the Flight Mechanics Panel of the Group.

John E. Lee of MSC's Office of the Assistant Director for Engineering and Development, and John W. Kiker of the Systems Evaluation and Development Division will make the presentation to the NATO Group.

Also invited to attend were Walter C. Williams, MSC Deputy Director and a member of AGARD's Flight Mechanics Panel, and James K. Hinson, the third author of the paper, of the Systems Evaluation and Development Division.

###

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT CENTER  Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-75
April 10, 1963

HOUSTON, TEXAS -- The Manned Spacecraft Center's Apollo plans will be outlined to the Conroe (Texas) Kiwanis Club on April 11 by Joe T. Doke of the Apollo Spacecraft Project Office.

The goal of the Apollo project is to land two U.S. astronauts on the moon within this decade.

Doke, who is with the Apollo Systems Integration Office at MSC, manages the mechanical integration of the Apollo spacecraft to the launch vehicle and its facilities.

A native of Arkansas, Doke attended high school in Oklahoma. He holds a bachelor of science degree in mechanical engineering from the University of Oklahoma and is presently working toward a master of science degree from the University of Alabama.

With the National Aeronautics and Space Administration since February 1958, Doke has conducted research leading to the development of special ground support equipment, rocket engines and related equipage. Recently, he presented a technical paper on "Electrolytic Corrosion" to the Tulsa Division of the American Society of Mechanical Engineers. Doke is also a member of the American Rocket Society.

Now residing in Houston with his wife and two children, Doke moved to Texas from Virginia when the Manned Spacecraft Center was relocated here.

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNNED SPACECRAFT
CENTER

NASA

Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-76
April 12, 1963

HOUSTON, TEXAS -- Space Surgeon Stanley C. White, named 1962 Laureate by the International Academy of Aerospace Medicine for his role in organizing the medical support of U.S. manned space flights, has been reassigned by the U.S. Air Force.

The Chief of Manned Spacecraft Center's Crew Systems Division will continue his Air Force career at the Aerospace Medical Division of Brooks Air Force Base, Texas. The reassignment, effective July 2, concludes a "detached (from the Air Force) duty" with MSC, to which he was assigned in October, 1958, then the Space Task Group at Langley Air Force Base, Virginia.

A Lt. Colonel in the USAF Medical Corps, Dr. White is best known for contributions leading to the development of the life support systems for Project Mercury. In 1960, he was named for the Melbourne W. Boynton award for space medicine research, and in 1961, he received the Louis G. Bauer Founders award from the Aerospace Medical Association for his efforts in bringing together the total medical, human engineering,

- more -

Add 1
MSC 63-76

and man-support system efforts in Project Mercury. In 1962, he was also honored with selection to membership in the International Academy of Astronautics, elected as a fellow in the Aerospace Medical Association, and he was named one of two Laureates (in U.S. and in U.S.S.R.) by the International Academy of Aerospace Medicine, Brussels, Belgium.

Dr. White has served on the Bio-Astronautics Committee of the National Research Council of the National Academy of Sciences from 1959 to 1960; and on the Man-in-Space Committee from 1960 to 1962.

As Chief of the Crew Systems Division, Dr. White and his staff have been responsible for conducting a program of advanced research in the areas of human engineering, life support systems and crew equipment in support of manned space flights.

This includes the development testing and flight of the Mercury, Gemini and Apollo environmental control systems; of crew equipment, from space suits to emergency survival gear; research in bio-instrumentation; environmental physiology studies into effects of acceleration on man in the spacecraft, into development of restraints (harnesses), into effective methods for packaging nutritious foods for space, and into protection devices against radiation.

Dr. White has also acted as medical operations director of manned space flights through MA-7 -- the three-orbit mission flown by Astronaut M. Scott Carpenter.

Dr. White married the former Helene Rae Ross of Lebanon, Ohio. They have four sons: Stephen Douglas, 12; Stanley II, 9; Scott Wallace 6; and Stuart Raymond, 4.

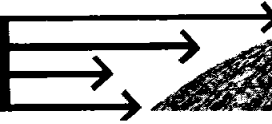
###

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNNED SPACECRAFT
CENTER

NASA



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-77
April 19, 1963

HOUSTON, TEXAS -- Visitors to the Manned Spacecraft Center's permanent space exhibit at Houston's World Trade Center can do their own tracking of orbital manned space flights and flights of man-made satellites.

A large, revolving plastic globe, representing Earth, will display any orbit desired through an adjustable satellite arm. A lighted bulb will simulate the spacecraft or satellite orbiting the earth.

The orbit demonstrator, developed by Ames Research Center, Moffett Field, California, will be on display for approximately a month.

The National Aeronautics and Space Administration exhibit is open daily from 10 a.m. to 4 p.m. and each Saturday from 11 a.m. to 4 p.m. The World Trade Center is located at Texas and Crawford Streets, in downtown Houston.

###



NASA
S-63-2243

S-II

UNITED STATES

S-1C

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT CENTER  **Houston**
1, Texas

WALNUT 8-2811
Ext. 3751

MSC 63-78

HOUSTON, TEXAS -- Just as any large new industry and the community in which it exists will have interacting economic effects, so will they have interacting effects in their physical environment.

NASA's Manned Spacecraft Center, planning on moving next year into its new facilities now under construction at Clear Lake, is seeking ahead of time to determine what physical effects operations at the Center will have on the local environment and what effects the local environment may have on MSC's operations.

Southwest Research Institute -- Houston has been awarded an \$11,820 contract to conduct an environmental study at and around the site to determine these effects and prepare the way for more detailed steps aimed at controlling them.

Under the leadership of Dr. Herbert C. McKee, assistant to the vice-president at Southwest Research Institute - Houston, the study will accomplish three major steps to be used as the basis for future planning to insure that MSC will be a "good neighbor" to the surrounding communities, as well as insure that space flight development carried out at the Center will not be adversely affected by environmental conditions existing in the area.

The three aims of the preliminary study are:

1. Documentation of the current environmental conditions on and adjacent to the site.

--more--

2. Prediction of future developments, both on the site as well as in the surrounding area, and the interacting effects on the site and in the area.

3. Recommendations for a continuing program of monitoring, sampling and testing, which may include such areas as background radiation, industrial hygiene, sanitary engineering, and community-wide patterns of water and air pollution.

Findings of the study will be coordinated with the Harris County Health Department, the Texas Water Pollution Control Board, the Texas Game and Fish Commission and other state and Federal agencies as appropriate.

Professor Arthur W. Busch of Rice University will serve as a consultant on the program. Professor Busch is a recognized authority in the field of industrial waste disposal problems in the Houston and Gulf Coast areas.

Engineers of the Southwest, as a subcontractor, will be responsible for all aspects of the program relating to water supply, hydrology, and sewage disposal. This organization has conducted studies on these problems for municipalities and other organizations in southeast Harris County and the Clear Lake area.

Several areas of NASA's operation will be studied. They will include storage and testing procedures for storable fuels used in small control thruster engines and other devices used in space vehicles. In addition, the program will examine the expected use of radioactive tracer materials for experimental purposes, similar to other experimental uses now common in various laboratories in the Houston area.

The study will also review the plans that have been developed for obtaining a suitable water supply and for sewage disposal, to insure that recent or anti-

icipated changes in MSC operations and plans will not create additional problems in these areas. So far as water supply and sewage disposal are concerned, the Manned Spacecraft Center has problems similar to a city of several thousand people, and a similar type of planning and preventive action is required.

Dr. Herbert C. McKee, project leader for the MSC study came to Houston in September 1962, when the Institute's Houston facility was opened. Formerly he had been with Southwest Research Institute in San Antonio for nine years in the Department of Chemistry and Chemical Engineering. Dr. McKee is known nationally for his work in pollution control. In 1956-58 he conducted an extensive survey of air pollution in the Houston area for the Houston Chamber of Commerce, and will utilize the information obtained then in the present study. Dr. McKee has also conducted studies in pollution control for new industries coming into an area for the first time, including chemical plants, refineries, and other industrial clients in Houston and elsewhere. He has performed atmospheric studies for the Government of Greenland and Alaska, and has conducted industrial pollution surveys in Jamaica.

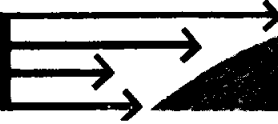
* * * * *

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNNED SPACECRAFT
CENTER

NASA



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-78
April 25, 1963

HOUSTON, TEXAS -- The astronauts making the United States' first two-man Gemini endurance space flight next year will be wired for sound like never before -- to a pair of small magnetic tape recorders that will register the spacemen's physical and mental reactions second-by-second throughout the journey!

Cook Technological Center Division of Cook Electric Company, in Chicago-suburb Morton Grove, Ill., has completed the first of the new biomedical recorders under contract from the National Aeronautics and Space Administration's Manned Spacecraft Center, Houston, Texas. The contract also includes development of playback equipment for post-flight analysis of the recorded data.

A pair of the new recorders weighs less than 6 pounds and occupies only 125 cubic inches of the Gemini spacecraft. Each recorder will receive and record continuously, for 30 hours, six kinds of simultaneous signals from sensors within the astronauts' spacesuits. Each also will have two extra reels, providing enough tape to stretch the length of five football fields and to record up to 90 hours of biomedical data on each recorder.

Add 1
MSC 63-78

Manned Spacecraft Center considers the recorders as being vital to one of Gemini's prime objectives -- detailed continuous analysis of astronauts' physical and mental endurance in long periods of space flight, pointing toward the Apollo moon project. Up to now Mercury flights have utilized spot-check telemetry to ground stations for biomedical data on astronauts in orbit.

The Center said the recorders are adaptable to Mercury flights.

Smallest ever developed for such long operation, each seven-channel recorder will register simultaneously electrocardiograph (EKG) heart readings, blood pressure, and respiration. Other parameter recordings may be established by MSC at a later date. One channel of each recorder will register time.

Dr. Albert A. Gerlach, manager of Cook's Research Section responsible for biomedical recorder development, said the machines are designed with sufficient amplifier sensitivity to pick up 1/1,000th-volt signals from signal conditioners and sensors within the astronauts' spacesuits. The recorders utilize two types of electronic processing -- direct, for heart, brain, muscle, and time recordings; sampled on-off or chopped, for blood pressure, respiration, and body temperature data. The choice of electronic processing for the tape channels will be pre-set before each flight, depending upon the type of recording and measurements desired from each astronaut.

Dr. Gerlach said the recorders can be set for intermittent operation through a programmer. There would be a recorder for each astronaut initially. It would be possible for the two Gemini recorders to be used consecutively instead of simultaneously, however, to check one man continuously or two or more men alternately.

###



NASA
S-63-5250

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT
CENTER

NASA

Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-79
April 30, 1963

HOUSTON, TEXAS -- Apollo mission trainers to put space-bound astronauts through simulated two-week trips to the moon and back have been ordered for NASA's Manned Spacecraft Center.

The Link Division of General Precision, Inc., Binghamton, N.Y. was selected by North American Aviation's Space Systems Division, Downey, California, to develop and install the two spacecraft simulators. Amount of the contract is expected to total approximately nine and one half million dollars.

One of the simulators will be placed at NASA's Houston facility and the other is to be at the Atlantic Missile Range, Cape Canaveral.

The Apollo mission simulators will train astronauts from launch through lunar orbit and return to earth.

Unique in design, the trainer provides a new concept in simulation which will project the training into deep space. The trainers will duplicate pre-launch conditions, first and second stage boost and separation, parking and earth orbits, injection for

Add 1
MSC 63-79

into translunar trajectory, initial and mid-course coast, circumlunar pass, pre-retro coast and retro to circular lunar orbit, separation with lunar excursion module, rendezvous with lunar excursion module, injection to trans-earth trajectory, initial mid-course coast, reentry and landing.

The trainers will not simulate space conditions such as zero gravity (weightlessness) or G forces.

The simulator will provide sound effects of booster separation and space lighting effects so that astronauts will be able to see the moon and earth in proper relation to the spacecraft during all mission phases.


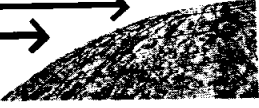
The computer will respond to crew and instructors' actions by solving mathematical and logical problems, providing data exchange, storing information, making decisions and simulating equipment failures diagnosis.

A total of twenty seven major subcontracts amounting to more than two hundred million dollars for Apollo spacecraft systems have been awarded companies in states. More than two thousand firms throughout the United States are expected to participate in the program.

###

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT CENTER   Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-80
April 25, 1963

HOUSTON, TEXAS -- The National Aeronautics and Space Administration today announced that Astronaut John H. Glenn, Jr., plans to take about ten days' vacation in Japan with his family following the orbital flight of L. Gordon Cooper, tentatively scheduled for mid-May.

— Glenn will be voice communicator between Cooper and a Project Mercury tracking ship stationed about three hundred miles off the coast of Japan. He will pass through Tokyo early in May enroute to Nagasaki where he will board the tracking ship, the Coastal Sentry.



About four days after the Cooper flight, Glenn will be joined in Japan by his wife, Annie, and two children, David, 17, and Lynn, 15, who will arrive from their home in Houston, Texas.

America's first astronaut to orbit the earth said, that after spending leave time in Japan ten years ago, he has long wanted to revisit that country to introduce his family to Japanese culture and visit as many places of interest as possible.

The Glenn family plans to spend three days in Tokyo and about seven days vacationing in other parts of Japan. In Tokyo, Glenn has expressed an interest in sightseeing and meeting and talking with people, particularly the young people.

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT CENTER    Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-81
May 6, 1963

HOUSTON, TEXAS -- Eight of NASA's astronauts are "flying" a unique simulator at Ling-Temco-Vought in Dallas to study well in advance the problem of what to do should the Apollo Lunar Excursion Module's primary guidance system fail during the vehicle's descent to the moon and the landing have to be abandoned.

They're working on manual procedures and instrument display data which may be needed to cope with that emergency in LTV's Manned Space Flight Simulator - a maneuvering, ground-based device which can simulate numerous phases of space missions including launch, orbit, rendezvous, earth and lunar landings and many others.

Contract for the study was awarded by the National Aeronautics and Space Administration's Manned Spacecraft Center at Houston and totals approximately \$100,000.

In the Apollo program, scheduled to place U. S. astronauts on the moon before 1970, a three-man Command Module and the smaller Lunar Excursion Module are placed in lunar orbit. The LEM vehicle with two astronauts aboard detaches from the Command Module, makes the actual lunar descent and later performs a rendezvous with still-orbiting Command Module for the return trip to earth.

Add 1
MSC 63-81

The LTV study assumes that the lunar landing vehicle's primary guidance system has a failure on its approach to the moon and the astronauts must use manual control to abort the landing and intercept and rejoin the Command Module.

To make the lunar descent, the LEM vehicle would use its rocket motors to drop below orbital velocity and burn them until reaching the surface. Should a guidance system failure occur at any point in the landing approach, the astronauts could control the abort launch trajectory manually and by a proper combination of applying thrust and coasting, rendezvous with the Command Module for the return to earth.

In the LTV study, the astronauts, as experts on space flight, are evaluating various manual control techniques and instrument display requirements necessary for a successful LEM emergency abort.

Several approaches to interception and rejoining of the Command Module are being studied. Factors considered include the relative positions of the LEM and Command Module at the failure point, the rendezvous time required, ease of accomplishment and the LEM's fuel situation.

The LTV simulator gives the astronaut a very realistic "flight" experience in performing the abort and rendezvous mission. Coupled to a huge computer complex, the device maneuvers accurately in response to each movement of the controls.

As the astronaut flies the mission, he sees a moving presentation of the lunar horizon and star field and the orbiting target "vehicle" he is attempting to intercept and rejoin. Using the cockpit instruments and these references, he can follow the path of the target vehicle and accomplish the intercept in the most efficient manner for a given circumstance.

Add 2
MSC 63-81

The external visual cues such as the star field and target are provided by means of computer-controlled projectors which move in relation to the simulated space vehicle's position and attitude. These display the moving images on the inside of a large spherical fiberglass structure surrounding the simulator.

Astronauts participating in the study include M. Scott Carpenter and Walter M. Schirra, Jr. of the original seven astronauts and Neil A. Armstrong, James A. McDivitt, Elliott M. See Jr., Edward H. White, Charles Conrad and John Young of the later group. D. C. Cheatham of MSC's Spacecraft Technology Division is project officer for NASA and A. D. Schaezler of LTV's Vought Astronautics Division is project engineer.

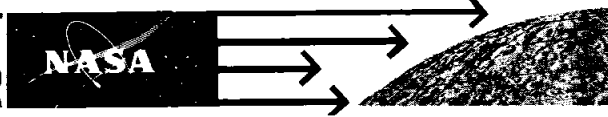
"From flights conducted, there seems to be no doubt an astronaut can manually accomplish the landing abort, launch and intercept mission in the event the LEM primary guidance system should fail," Schaezler said. "He can use any one of several intercept techniques and perform his mission successfully."

###

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNEED SPACECRAFT
CENTER



Houston
1, Texas

Walnut 8-2811
Extension 3751

63-82
May 2, 1963
NASA Clip Sheet

HOUSTON, TEXAS -- Floating in free space outside his spacecraft, a Gemini astronaut may be eager to rejoin his vehicle. If he pulls on the tethering line too eagerly, however, he may send himself on a collision course with his spacecraft.

One solution, perhaps, is a tethering line made rigid once out of the spacecraft on which the astronaut could move without abruptly jerking himself or his spacecraft.

Thus, the fanciful problems of space take on a realistic solution in Manned Spacecraft Center's Crew Systems Division, where imaginative and creative engineers are pioneering in a new environment.

The "rigid tethering line" idea may become obsolete by the time the first, daring astronaut ventures out of his protective Gemini spacecraft, and an entirely new concept may be adopted. But the ideas which must generate in this unique Division of MSC are untethered by precedent or tradition, free to travel the creative channels of the imagination, unhampered in scope or dimension.

In one branch, a man may be spinning himself into a "web" -- tethering himself at several places to solve the problem of working in free space and in zero gravity.

Add 1
MSC 63-82

In space, a force exerted in one direction may respond with a total force in the opposite direction. An astronaut turning a wrench in space, for example, may find himself being "torqued" instead. So, this bright engineer is investigating the possibility of a torque-restraining web.

In the space suit development area, the criteria for design of the extravehicular suit for the Gemini astronaut, and for the moon-landed Apollo astronauts are being established.

"We're playing within ground rules of temperatures ranging from plus-250 to minus-250 degrees in a typical lunar day," explained Richard Johnston, the Division's Deputy Chief. Temperature control alone will be an engineering and design feat.

"We're contending with a lunar glare -- the sun reflecting from the lunar surface which may blind or may irritate the astronaut's eyes; the design of a life-supporting system which can provide the astronaut with electrical power, communications equipment, telemetering equipment, and an environmental control system complete with breathing oxygen, purifying equipment, temperature and humidity control .. reliable and light enough (40 lbs.) to be worn on the astronaut's back."

The environmental control system provides the astronaut with his liveable atmosphere. It needs to provide oxygen at a satisfactory partial pressure; it needs to control metabolic products, such as CO₂, odors, etc.; it must control cabin or, as in the case of back-packs, suit temperature; it must have a method for removing heat, and it must control humidity. Two ECS designs are being developed for both Gemini and Apollo astronauts - one for the spacecraft (Apollo's LEM will have a separate one, also) and another for the extravehicular suits.

Add 2
MSC 63-82

The lunar back-pack must also allow for all contingencies. Being considered into the basic design is a "buddy system" capability. In the event one lunar astronaut runs into an emergency, he can "plug" himself into his companion's back-pack for life-sustaining oxygen, until they both can return to the safer confines of the lunar excursion module.

Gemini and Apollo astronauts may wear their suits for as long as two weeks at a stretch. In making the suit habitable, comfort plays an important role. Questions uppermost in his mind are: Will the constant pressure within the suit, the heat and cold extremes on the lunar surface, damage the suit, wear it through, or split the seams? Will the suit be capable of handling body wastes over a long period? Will he have the needed mobility to manipulate his fingers, twist his wrist in a full-pressure glove, to bend at the waist easily, to flex his knees or elbows quickly and efficiently?

Engineering designers are contemplating partial removal of the suit for comfort during flight, sectioning it to allow removal of helmet and gloves.

Gemini as the training phase for the later, more ambitious "giant step" to the moon in Apollo, may allow its astronauts to step out of the spacecraft into free space. The extra-vehicular suit for Gemini needs to be as reliable as the extra-vehicular suit for Apollo, for the life within each is exposed to the same dangers and consequences. Within the spacecraft, the space garment is a secondary protective device against dangers, as, for example, rapid decompression from a meteorite puncture of the spacecraft cabin wall; but, once the astronaut steps out of his spacecraft, the suit becomes his primary protective device.

Add 3
MSC 63-82

To increase reliability, back-up systems are sprinkled liberally in the primary systems of the spacecraft. This same "insurance" in the extra-vehicular space suit design may be incorporated into a series of pressure bladders between the wearer and the exterior "skin" of the suit. In the event the astronaut tears his suit on the lunar terrain, his life will not be endangered instantly. The localized decompression of his suit will give him temporary protection until he can return to his spacecraft.

Food, as important for the astronaut's survival as the air he breathes, is a subject of concern to a small group of space nutritionists in the Division. While one engineer is developing new packaging techniques, another is devising steps or procedures for the astronaut to eat while under full pressure, that is, in his inflated suit.

Still another branch is painstakingly developing hardware they really hope the astronaut will never have to use -- his survival gear. Designers in this area must prepare the astronaut for survival in any contingency, on land or in water, and in any climate: tropical, desert, or sub-artic. As underlines every effort within MSC, these designers must develop equipment to be compact, miniaturized, lightweight, to fit into a compartment of pre-designated dimensions and tolerances. Articles are not only packaged tightly, but whenever possible, all the air within the package is evacuated to make it as small as is conceivably possible.

Two other branches within the Division, the space medicine and the environmental physiology group, concern themselves with basic research: how the body reacts in space, research into bio-instrumentation sensors (electrodes)

Add 4
MSC 63-82

for measuring human body responses during space flight, and the study of man's limits to acceleration, noise and vibration. Support and restraint systems which protect man under acceleration and landing impact are the outcome. For example, now being developed is a universal net couch for spacecraft.


The net couch consists of a unique loose-knit fabric framed by aluminum tubing. Under heavy loading, the fabric "gives" under the astronaut, stretching to absorb most of the heavy loading imposed upon him during landing impact, yet refrains from bouncing him back up against his restraining harnesses (at which time injury is most likely to occur). Lightweight, interchangeable, and capable of being stored out of the way during long duration flights, it will also allow more "working room" in the spacecraft for the astronauts.

The job of the Crew Systems Division is, in essence, to "develop hardware for space, and to also evaluate alternate concepts of hardware", according to Johnston. As the astronauts gain more experience in space flights, new and uniquely different problems will be encountered. But the changes are that - be the problem edible equipment or spacecraft structures which could be reconstituted with water for an emergency food supply in space, or oxygen-giving algae plants for long distance flights to distant planets years away -- some bright engineer in the Crew Systems Division has thought about it already.

###

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT CENTER  **Houston**
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-83
May 2, 1963

HOUSTON, TEXAS -- J. T. "Joe" Doke, son of a retired farmer who farmed "general row crops" on a 200-acre farm outside of Wetumka, Oklahoma, manages the mechanical mating of the three modules composing the Apollo spacecraft with its booster.

The Apollo spacecraft, lifted into translunar trajectory by a gigantic Saturn V rocket sometime in the late 'sixties, will place two U. S. astronauts on the moon to explore the lunar surface.

With the National Aeronautics and Space Administration since February 1958, J. T. Doke is assigned to the Apollo Systems Integration Office at Houston's (Texas) Manned Spacecraft Center. The Center, under the direction of Dr. Robert R. Gilruth, is responsible for manned space flight research and development which began with the establishment of the Space Task Group in October, 1958, and was realized with the first U. S. manned space flight of Commander Alan B. Shepard, Jr. on May 5, 1961. Project Mercury, this month, will log another space record when Major L. Gordon Cooper, Jr. in "Faith 7" may orbit as many as 22 times around the earth, to spend one full day in space. After Mercury, Project Gemini will be launched to develop pilot techniques in rendezvousing and docking in space, and long duration flights

Add 1
MSC 63-83

of up to two weeks in length. Lessons learned will lead to Project Apollo, from which man will gain a better understanding of the universe in which he lives through the exploration of our nearest neighbor in space -- the moon.

J. T. Doke, the fifth and last son born to Mr. and Mrs. M. C. Doke in Clarksville, Arkansas, entered the world on October 29, 1934.

"My family ran out of names by the time I arrived, and named me 'J.T.'", Doke said, "but my brothers and friends started calling me 'Joe'". He explained that although he uses 'Joe' often, he never registers at a hotel with that name because "invariably, they ask me to pay in advance".

The Dokes moved to Oklahoma during Joe's early school years, lived in Wetumka proper, but farmed corn, cotton, and peanuts as tenant farmers on 200 acres about six miles west of Wetumka. The Doke boys pitched in on the farm chores. "Whatever there is to do on a farm, we did it".

Brother Kenneth and Joe were sent to college, while Dewey and Doya moved to Tulsa where Dewey became a shop foreman for an oil field pressure vessel manufacturing company, and Doya, a painting contractor. Another brother, Lee, was killed during World War II in the Philippines where as an airborne engineer he was assigned to an airport-building crew. Kenneth was graduated as a mechanical engineer and became employed with Boeing Aircraft Co., New Orleans.

Now retired, Daddy Doke resides in Wetumka with his wife.

Joe Doke went to the University of Oklahoma, majored in mechanical engineering, and was graduated in 1958 with a B.S. degree. Joe wanted to enter the space technology field, and NASA's Marshall Space Flight Center (at the time, Army Ballistic Missile Agency under U.S. Army) in Huntsville,

Add 2
MSC 63-83

Alabama, captured his enthusiasm as being the first major rocketry center in the United States.

He married his high school sweetheart, Phyllis Jean Neese who lived a few blocks "down the street" from his home in Wetunka, and together they left for Alabama.

At MSFC, Joe became a member of the Propulsion Branch and channeled his energy into design and development of rocket engines, ground support equipment, and tests of preliminary design rocket engines.

Doke was involved in the early developmental work of the H-1 engine that will lift (with seven others) the Saturn I launch vehicle to place early, unmanned Apollo spacecraft into an earth orbit. He also worked on the F-1 engine of the mighty Saturn V launch vehicle which will launch U. S. astronauts toward the moon.

While in Alabama, Joe pursued further training at the University of Alabama, and is presently awaiting decision on his thesis which, if approved, will grant him a master's degree.

Joe Doke, his wife, and two additional Dokes: Jay Tobin, 5, who admires astronauts but wants to be an engineer, and Stacy Suzann, 3, who has not expressed her career choice because "she doesn't talk well, yet", moved to Houston in 1962 when the Manned Spacecraft Center was established here.

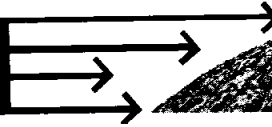
###

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNNED SPACECRAFT
CENTER

NASA



Houston
1, Texas

Walnut 8-2811
Extension 3751

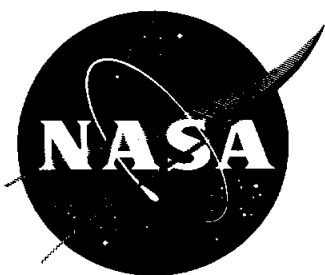
MSC 63-84
May 3, 1963

HOUSTON, TEXAS -- The flight of the Apollo spacecraft to the moon -- this country's national objective -- will be described by James C. Elms, Deputy Director of NASA's Manned Spacecraft Center, during the General Conference on Space Age Planning, held in Chicago's Civic Opera House, May 6-9. The Conference for businessmen, educators, students and professional people will conclude the Third National Conference on the Peaceful Uses of Space.

The Apollo spacecraft with three U. S. astronauts on board will be placed in a translunar trajectory by a Saturn V launch vehicle in the late 'sixties. Once in lunar orbit, the lunar excursion module will detach itself from the command module, and two U. S. astronauts will descend in it to the moon's surface.

The Apollo mission, illustrated through slides, will be explained in Elm's talk, entitled: "Manned Spacecraft" on Monday, May 6. Elms is the second speaker during the afternoon session on manned exploration of space. The conference, which opens at 8:45 a.m., will be welcomed by Chicago's Mayor Richard J. Daley. NASA Administrator James E. Webb will deliver the keynote address.

###



NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
MANNED SPACECRAFT CENTER
HOUSTON 1, TEXAS

FOR RELEASE:

JAMES C. ELMS
DEPUTY DIRECTOR FOR DEVELOPMENT AND PROGRAMS
NASA MANNED SPACECRAFT CENTER

BIOGRAPHY
FEBRUARY 1963

James C. Elms joined the NASA Manned Spacecraft Center early in 1963 as Deputy Director for Development and Programs, charged with primary management responsibility for all MSC manned spacecraft development projects, including cost control, scheduling, engineering, supervision and administrative support.

A native of Los Angeles, Elms was born on May 16, 1916. He had been Director of Space and Electronics for Aeronutronics Division of the Ford Motor Company at Newport Beach, California, and brought to NASA more than 15 years of top industrial development management experience.

Prior to his association with Aeronutronics, Elms was with the Crosley Division of Avco, first as vice-president, Electronic Systems, and later as the executive vice-president. This division produced the FPS-26 height-finding radar and the VRC-12 FM communications system. Prior to that he was with the Martin Company's Denver Division as manager of the Avionics Department, with responsibility for design and development of guidance, flight control and other electronic and electrical systems for the Air Force Titan ICBM.

Before joining the Martin Company, Elms was manager of the Armament Systems Department of the Autonetics Division, North American Aviation, responsible for research, development and design of fire control, radar, and other allied systems. During this period, the MG-4 fire control system was developed and produced in large quantities for use in the F-86K interceptor aircraft by the NATO nations. The Nasarr radar was developed and is now being used in the F-105, F-104G, CF-104, and F-104J aircraft. The radar concepts established during this period have now been applied to current SAC bomber aircraft. Bombing-navigation equipment also under development during this period is currently in production for use in the A3J aircraft.

Earlier, Elms was chief development engineer of G. M. Giannini and Company, engaged in the development of small aircraft and missile instruments.

Elms served in the Air Force during World War II. Two years of his service were spent at Wright-Patterson Air Force Base as a research and development officer in armament and fire control. At the time he left the Air Force, he was head of the Guided Missile Unit of the Armament Laboratory.

Before the war, Elms was employed as a stress analyst at Consolidated Vultee Aircraft Corporation.

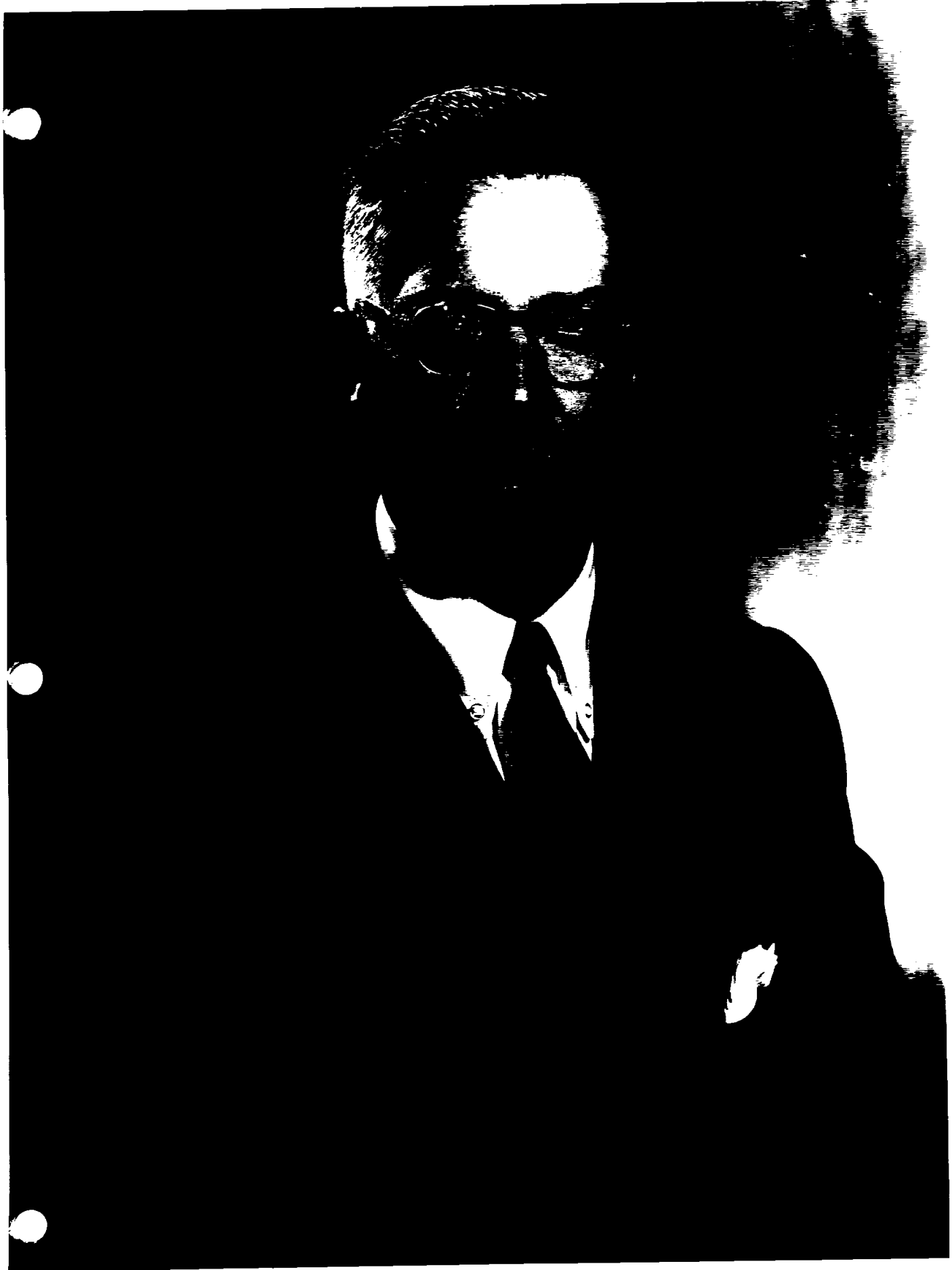
Elms received his BS degree in physics from the California Institute of Technology and his MA degree in physics from the University of California at Los Angeles, where he was a member of the faculty as a research associate in geophysics. His research consisted of seismic investigation of the earth's crustal structure and earth tides.

Elms is a senior member of the Institute of Radio Engineers, a member of the Institute of the Aerospace Sciences, the American Rocket Society, and the Armed Forces Communications and Electronics Association. He is a registered professional engineer in the State of California and has patents, both granted and pending, in armament and electronics.

He is married to the former Patricia Marguerite Pafford of Phoenix, Arizona. The couple has four children: Christopher 17, Suzanne 14, Francescia 12, and Deborah 8.

The NASA Manned Spacecraft Center -- under the direction of Dr. Robert R. Gilruth -- the Nation's experienced management agency in the field of manned space flight research and development, has been responsible for Project Mercury since its inception. MSC has the responsibility for developing manned spacecraft, for training space flight crews to man these craft, and for conducting Projects Mercury, Gemini and Apollo for the development of space flight technology, for the acquisition of knowledge, and for the use of man in exploring space for the generation of better understanding of the universe in which we live. The Center is one of several research and space flight Centers within the broad NASA organization and frequently calls upon other NASA facilities, government agencies, private industry and educational institutions for support in its programs.

NASA
S-62-6295

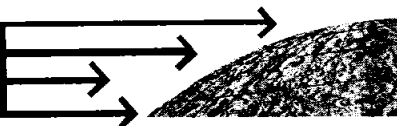


NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNNED SPACECRAFT
CENTER

NASA



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-85
May 3, 1963

HOUSTON, TEXAS - The first drop test of the Project Apollo earth landing system was successfully accomplished by Northrop Corporation, El Centro, California today for the NASA, Manned Spacecraft Center, Houston, Texas.

Released from a specifically modified U. S. Air Force C-133 Cargo plane at altitude, a boilerplate test vehicle, duplicating the size and weight of the Apollo spacecraft command module, was safely landed by a Northrop Ventura cluster of three ringsail parachutes. It was the first in a series of tests in qualifying the system for earth landing, after return from a lunar mission.

Operating of the landing system was initiated at 25,000 feet by an altitude switch that fired a small explosive charge separating the apex cover located at the top of the command module from the vehicle. One second after apex cover separation, a mortar was automatically fired deploying a 13-foot diameter conical ribbon stabilization/drogue/parachute. At approximately 15,000 feet the drogue "chute" was disconnected and three 16-foot diameter ringslot pilot "chutes" were deployed. Fifteen seconds after pilot "chute" deployment, a cluster of three North Ventura 88-foot main ringsail parachutes were deployed in a reefed condition for six seconds, the reefing lines on the chutes were automatically cut and the main ringsail parachutes were fully deployed, safely landing the boilerplate test vehicle at a rate of approximately 30 per second, landing well within human tolerance.

Add 1
MSC 63-85

Northrop Ventura is developing the Apollo earth landing system under subcontract to North American Space and Information Systems Division.

###

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT
CENTER

NASA



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-86
May 11, 1963

HOUSTON, TEXAS - - The first in a series of drop tests to qualify the parachute recovery system which will lower the two-man Gemini spacecraft to a water landing has ended successfully at El Centro, ^{California} the Manned Spacecraft Center announced today.

The drop was made over Tatu Range. Future drop tests will be made over the U.S. Navy's ^{Pacific Missile} P. M. Range off Pt. Mugu, California.

The parachute recovery system, designed by Northrop's Ventura Division, will be Gemini's prime water landing system. The parachute system is designed for wet landings and will be used for unmanned and early manned Gemini flights. The first manned flight is scheduled for 1964. It will be preceded by two or three unmanned flights.

Project Gemini is designed to develop pilot techniques of docking and rendezvousing in space, and to extend space flight duration up to two weeks.

Add 1
MSC 63-86

The parachute recovery system consists of an 18-foot diameter ring-sail drogue and an 84-foot diameter ring-sail recovery parachute packed in a rendezvous-and-recovery section mounted on the small end of the spacecraft. The canister also houses the Gemini rendezvous radar equipment. Mercury experience has been used extensively in the design of the parachutes and necessary system components.

Just completed were a series of 20 development drops of the main and drogue parachutes at El Centro, California. These tests checked out the deployment characteristics and the structural integrity of the individual chutes.

The qualification tests, scheduled for completion in early 1964, will check out the operation of the recovery system. This will include the parachutes, the pyrotechnic devices which explosively trigger the deployment and release of the parachutes and the timing system -- technically called "sequencing," which triggers the various events at the proper time. Twenty tests are scheduled using a Gemini boilerplate, a dynamic duplication of the Gemini spacecraft in configuration, weight, weight distribution (center of gravity) and "response" through its size and weight. Two additional tests using "static articles," a structural duplication of the Gemini spacecraft not only in size and weight, but in materials and construction, will finalize the testing of the recovery system.

Tests over the U.S. Navy's Pacific Missile Range, Pt. Mugu, California (El Centro, California, will be used as an alternate drop area) will be made from a C-310 cargo-type aircraft. The boilerplate, mounted on a sled within the aircraft, will be extracted from the rear of the cargo compartment by an extraction chute. After extraction, the boilerplate will separate from the sled and will "free fall" to around 12,000 feet where the stabilization parachute is separated and the Gemini

Add 2
MSC 63-86

recovery system is "armed."

At 10,600 feet above water, the sequencing will be initiated with the deployment of the drogue parachutes. After a two-second delay, the canister will separate to deploy the main parachute. The parachute will descend in "reefed" condition for 8 seconds, when it will "dis-reef." (Reefing, or restricting the skirt from opening until a safe descent speed is reached, prevents excessive loading on the canopy. Dis-reefing releases the restraining band, and allows the canopy to blossom). After 22 seconds, a single point release is fired to free the bridle which will allow the spacecraft to rotate on a two-point suspension system and assume a "nose-up" position 35 degrees from the horizontal.

The 35-degree impact inclination lowers the spacecraft into the water on the "corner" of its heat shield, appreciably lessening the shock of landing impact. This method of water landing also eliminates the need for the impact bag which was used for Mercury spacecraft landings.

The parachute recovery system will be replaced later by a land landing system for which the paraglider is now under development. Throughout manned Gemini flights, ejection seats -- which can be triggered by each astronaut individually for a rapid escape from the spacecraft -- will serve as the emergency back-up recovery system.

####

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT CENTER  **Houston**
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-88
May 10, 1963

HOUSTON, TEXAS -- A more detailed division of management responsibilities at the NASA Manned Spacecraft Center was announced today by Dr. Robert R. Gilruth, Center Director. It divides the operational from the developmental activities within MSC projects.

Walter C. Williams, named Deputy Director for Mission Requirements and Flight Operations last November, will develop mission plans and rules, crew training, ground support and mission control complexes, and will manage all flight operations conducted by MSC.

James C. Elms, named Deputy Director for Development and Programs in early 1963, will manage all MSC manned space flight projects, including total project planning. In addition, Elms will plan, organize, and direct Center activities providing administrative and technical support for the entire MSC operation.

Add 1
MSC 63-88

Concurrently, Williams is Director of Flight Operations in NASA's Office of Manned Space Flight in Washington, D.C., reporting directly to D. Brainerd Holmes. In this capacity, he has complete mission authority during flight tests of Mercury, Gemini and Apollo.

In announcing the responsibilities, Gilruth listed the following organizations reporting directly to Williams:

G. M. Preston, MSC Manager of Atlantic Missile Range Operations and Chief, Preflight Operations Division; Christopher C. Kraft, Jr., Chief, Flight Operations Division; Warren J. North, Chief, Flight Crew Operations Division; Dr. Charles A. Berry, Chief, Center Medical Operations Office; Wesley Messing, MSC Manager of White Sands Missile Range Operations; G. Barry Graves, Assistant Director for Information and Control Systems, specifically to implement the Integrated Mission Control Center (IMCC) and the Ground Operations Support Systems, (GOSS); and Kenneth S. Kleinknecht, Manager, Project Mercury.

Project Mercury personnel, many of whom probably will be absorbed in the mission requirements and flight operations areas upon completion of the planned Mercury flights under the program, report to Williams.

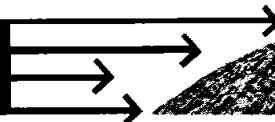
Reporting to Elms under the new organizational structure are: Assistant Director for Engineering and Development Maxime A. Faget; Assistant Director for Information and Control Systems G. Barry Graves (for other than IMCC and GOSS); Assistant Director for Administration Wesley Hjernevik; Acting Apollo Spacecraft Project Manager Robert O. Piland, and Acting Gemini Project Manager Charles W. Mathews.

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT
CENTER

NASA



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-89
May 13, 1963

Walter C. Williams, Director of Operations for the nation's sixth manned space flight, reported that the first half of the two-day split countdown was completed this morning and that the countdown will be picked up at midnight tonight. Everything is in readiness for the planned launch time of 8:00 a.m., EST (7:00 a.m., CST) Tuesday.

Astronaut L. Gordon Cooper spent the day in a last minute mission review with Dr. Robert R. Gilruth, Director of the Manned Spacecraft Center, Williams, Flight Director Chris Kraft, Project Mercury Director Kenneth Kleinknecht. Alan Shepard, mission backup pilot, Ernest Amman, Merritt Preston, and John Hodge.

Cooper will have dinner at 6:00 p.m., EST, in Hangar S and then will rest until he is awakened at approximately 2:00 a.m., EST, for breakfast, and final preparation for the flight.

There has been no significant change in the weather since this morning's forecast, except in the eastern Atlantic, where fresh winds and moderate seas are now expected.

Cloudiness at Cape Canaveral continues to be the major concern.

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT CENTER  **Houston**
1, Texas

Walnut 2-2811
Extension 3751

MSC 63-90
On receipt

CLEVELAND-BUILT AEROMEDICAL RECORDER MONITORS

COOPER'S FLIGHT

The jumbo-sized recording system produced in Cleveland provided the primary medical monitoring facility at Cape Canaveral as Astronaut Major Gordon Cooper circled the earth in the capsule, "Faith 7." The recorder, which displayed medical information on a 30-inch expanse of moving chart paper, was designed and built by Brush Instruments, Division of Clevite Corporation, Cleveland, Ohio.

Teamed with 22 other ground- and ship--monitoring stations around the world, the specially-designed system collected and displayed volumes of data on heart action, blood pressure, capsule and suit temperature, respiration and body temperature. All information appeared in the form of continuous wiggling traces written by pens on a 15-inch wide chart. The chart contained preprinted parallel grids one for each channel of information, which enabled flight surgeons to detect and measure the slightest variations precisely as they occurred in Cooper's condition. Medical observers could watch results over the 3-inch viewing table as the chart moved from right to left at a steady 25 millimeters per second.

The unusually broad viewing surface presented a full half-minute of recorded data at all times, thus allowing time for medical men to detect trends or slow changes in any one or more biomedical functions of the astronaut.

Major interests in the data began shortly after Cooper had entered the capsule. From electrocardiographic, blood pressure, respiration and temperature sensors attached to his body, information on Cooper's exact state of being was telemetered to the medical blockhouse, where it appeared immediately on the recorder chart. Recording continued through prelaunch preparations and became most critical in the various stages of lift-off, maximum acceleration, and weightlessness. Once out of telemetry range of the Cape, data were picked up by shipborne stations, later in Africa and around the world, until "Faith 7" again whirled within range. Each orbit contributed important new information.

Several experiments designed to produce biomedical information under various forms of stress or repose were conducted during the 34-hour flight. Special exercises during the 2nd and 7th orbits tested the effects of energy expended while in weightless condition. A later period of 8 hours was assigned sleep, followed by slight stimulus to restore alertness. The effects of these and other induced changes were seen directly on the recorder chart.

The Brush system has a number of innovations, including a forced fluid writing system by which ink is delivered to the pen tip under pressure. The system insures clear, uniform-thickness traces whether the pens move slowly or at high speed. Accuracy of the recorder is within one-half percent of absolute and is continuously maintained by a built-in device which detects and corrects errors simultaneously. The recorder is mounted at 30° angle in the large console, affording space for signal amplifying equipment and controls, and for associated medical observation instruments.

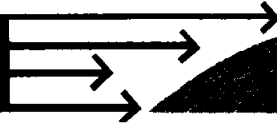
#

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT
CENTER

NASA



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-91
May 24, 1963

Houston -- Manned Spacecraft Center has awarded a definitized contract estimated at \$949,000 to the Westinghouse Electric Corporation for the design and delivery of the main drive system of the flight acceleration facility to be built at MSC's Clear Lake site.

The system is due to be installed by mid-May, 1964.

The main drive motor and three-unit motor generators set and switch gear will be fabricated at Westinghouse's Large Rotating Apparatus Division, East Pittsburgh, Pennsylvania, and its Research and Development Center, Pittsburgh.

The flight acceleration control system will be fabricated at the Westinghouse Plant in Buffalo, New York.

MSC will use the flight acceleration facility for crew training, for equipment development and test and biomedical testing under g-loads equivalent to those encountered in space flight.

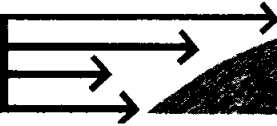
The main drive motor will provide power to rotate a 50-foot arm to the end of which will be fixed gondolas for men or equipment.

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT
CENTER

NASA



Houston
1, Texas

WALNUT 8-2011
EXT 3751

63-92
May 29, 1963

HOUSTON, TEXAS -- The Grumman Aircraft Engineering Corporation, contracted by NASA's Manned Spacecraft Center to build the lunar landing vehicle in which two U.S. Astronauts will descend to the moon's surface, has named Space Technology Laboratory to develop the lunar descent and landing engine.

A division of Thomason-Ramo-Wooldridge Corporation, STL was selected by Grumman as a result of competition.

The lunar excursion module (LEM) of Project Apollo -- the U.S. goal to place U.S. Astronauts on the moon within this decade -- will detach from the Apollo spacecraft orbiting around the moon, and will slowly descend to its surface.

Two approaches to development of the descent and landing engine for the LEM are being pursued. STL is developing an engine with a ten-to-one mechanical throttling range, while Rocketdyne -- a division of the North American Aviation Corporation -- was recently selected by Grumman to develop a gas injection scheme for throttling. The parallel development program will continue for approximately a year before a decision will be made between the two development approaches. The selected method will go into production models of the LEM.

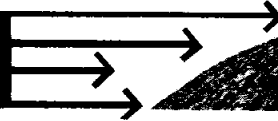
* * * * *

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT
CENTER

NASA



Houston
1, Texas

WALNUT 8-2811
Extension 3751

MSC 63-93
May 28, 1963

HOUSTON, TEXAS -- Problems with two connectors to an electrical amplifier in "Faith 7" forced Astronaut Gordon Cooper to manually fly his spacecraft back to Earth.

The two connectors are located in the AMP CAL (Amplifier Calibrator) where electrical signals of various spacecraft sensors are converted into commands. These commands cause activation of the hydrogen peroxide jet thrusters in the automatic control system to maintain proper spacecraft position in relation to the Earth. The spacecraft sensors include the gyroscope and infrared horizon scanners.

First, the appearance of the .05G panel light and later the failure of the AC power from the inverters signaled the problems to Astronaut Cooper.

Careful detailed post flight examination of the spacecraft circuits revealed the following facts:

The inverter trouble was traced to an electrical power connector, which among other functions, passes the AC output from the inverter bus (ASCS) into the AMP CAL. The insulating qualities of the connector had failed and permitted the AC power line to find a ground, causing a short circuit. The inverters will not operate in the event of such a malfunction in the circuits and the operating characteristics observed in flight were as expected for such an electrical fault. Post flight examination of the inverters showed them to be undamaged.

--more--

Corrosion was found in and around another electrical connector through which some of the .05G circuits passed. Presence of the corrosion indicated the possibility that moisture had collected in the area and resistance checks of the current passing through the connector indicated changing resistance as though the system were drying out. Later, tests with completely dried circuits and a new power connector showed satisfactory operation of the AMP CAL, including the .05G circuit. Introduction of small quantities of moisture into the plug resulted in actuation of the .05G circuit as it had done during flight. Thus, it is concluded from these tests that actuation of the .05G circuit during the MA-9 mission probably resulted from the effects of moisture in the connector.

The inverter and .05G troubles during the mission were traced to independent electrical connectors that failed out different times during the flight. There is no indication that the failures were connected. Other than the fact that electrical insulation broke down in both cases.

Correction of these problems will include tighter control of moisture within the spacecraft and an increase of the protection of electrical connectors and other components from moisture.

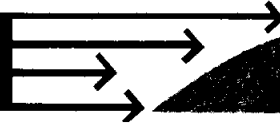
* * * * *

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT
CENTER

NASA



Houston
1, Texas

WALNUT 8-2811
EXT. 3751 - 3781

MSC 63-94

HOUSTON, TEXAS -- The Manned Spacecraft Center has announced the realignment of its administrative organization, headed by the Assistant Director for Administration, Wesley L. Hjernevik.

Major change in the administrative organization of the center is the establishment in the Office of the Assistant Director for Administration of the position of Manager, Missions and Operations Support, and elimination of the office of Manager, Center Services, Martin L. Byrnes, who has served as Center Operations Manager, will move into the new position.

Byrnes, in his new position, will be responsible for assuring that effective business management service is provided to those elements of MSC reporting to the Deputy Director for Mission Requirements and Flight Operations and will monitor business administration activities at MSC's White Sands Residence Office and Cape Canaveral Operations.

Administrative divisions of MSC which formerly reported to the Manager, Center Operations, have been realigned in two new offices, the Office of Administrative Services, to be headed by Douglas R. Hendrickson, and the Office of Technical and Engineering Services, to be headed by Joseph V. Piland.

Divisions in the Office of Administrative Services will include Office Services, Logistics and Technical Information. Hendrickson, as Chief of Administrative Services,

--more--

will be responsible for the overall planning, direction, coordination and administration of logistical, technical information and administrative support for all MSC activities. Hendrickson was formerly assistant chief of the MSC Financial Management Division.

Reporting to Piland as Chief, Technical and Engineering Services will be the Facilities Division, Photographic Services Division (under a new name, Photographic Division), Technical Services Division and a newly-created division, Engineering, which will provide engineering support services to MSC.


Formerly Assistant to the Manager, Mercury Project Office, Piland will be responsible for the overall direction of technical support services required by MSC and will effect the necessary coordination and planning of program effort to assure these services are responsive to MSC activity requirements on a timely basis.

Assistant Director Hjernevik will have five other divisions reporting directly to his office, Management Analysis, Procurement and Contracts, Financial Management, Personnel and Security.

* * * * *

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT CENTER  **Houston**
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-95
June 5, 1963

HOUSTON, TEXAS - The National Aeronautics and Space Administration will recruit to 15 new astronaut trainees this summer.

The program is opened to both civilian and military volunteers. Cut-off date for applications is July 1, 1963. The military services which will pre-screen its pilots, will have until July 15, 1963, to pass on to NASA its recommended applicants.

Pilots selected will join the current astronaut pilot pool in October, based at NASA's Manned Spacecraft Center, Houston, Texas.

With slight exception, selection criteria are similar to those used in the selection of 9 new manned space flight candidates chosen by NASA in 1962. To qualify for this selection, a candidate must:

1. Be a United States citizen born after June 30, 1929 and 6 feet or less in height.
2. Have earned a degree in engineering or physical sciences.
3. Have acquired 1,000 hours jet pilot time or have attained experimental flight test status through the Armed Forces, NASA, or the aircraft industry.

Add 1
MSC 63-95

4. Be recommended by his present organization.

NASA also announced that conversation will be begun with representatives of nation's scientific community with regard to finding the earliest practicable ways in which scientists can be included in the Apollo mission.

Compared to 1962 selection criteria, the maximum age requirement has been reduced from 35, and certification as a test pilot, while still preferred, is no longer mandatory.

The age reduction is to insure a broad age spread in the pilot pool. Average age of the original group of 7 astronauts is 38; the second group, 34.

In addition, successful applicants will have to be in excellent physical and mental condition.

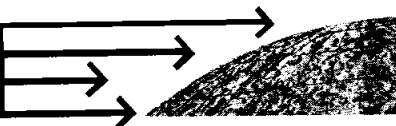
Applications are to be addressed to the NASA Manned Spacecraft Center, Personnel Office, P. O. Box 18534, Houston 1, Texas, Attn: JOHN CAIRL. Civilian applications must be postmarked no later than midnight July 1, 1963.

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT
CENTER

NASA



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-96
June 6, 1963

HOUSTON, TEXAS -- The 16 astronauts of the National Aeronautics and Space Administration Manned Space Flight programs received instruction in jungle survival this week (June 3-6) at the USAF S Caribbean Air Command Tropic Survival School at Albrook Air Force Base, Canal Zone, followed by field training in the local jungle.

The astronauts, all assigned to NASA's Manned Spacecraft Center at Houston, Texas, include the seven Project Mercury astronauts and the nine astronauts named by the agency in September 1962 to participate in the follow-on program - Projects Gemini and Apollo. The two groups have been integrated to furnish NASA with a 16-man team of test pilot-engineers for future manned flights.

The are: Neil Armstrong, Frank Borman, M. Scott Carpenter, Charles Conrad, Jr., L. Gordon Cooper, Jr., John H. Glenn, Jr., V. I. Gus Grissom, James Lovell, James McDivitt, Walter M. Schirra, Jr., Elliot M. See, Jr., Alan B. Shepard, Jr., Donald K. Slayton, Thomas P. Stafford, Edward H. White II, and John W. Young.

Add 1
MSC 63-96

Four other Manned Spacecraft Center personnel participated in the training. They were Dr. George B. Smith of the Aeromedical Section, Ray Zedekar and Bud Ream of Flight Crew Operations Division, and James Barnett of Life Systems Division.

This marked the first time that the astronauts have received tropic survival training as well as the first time that all 16 have gone through a training program together. The Albrook School was chosen because it is the only one of its kind operated by a United States Agency.

The tropic survival training was deemed necessary by Space officials because of the fact that the longer space flight missions will require that the spacecraft concerned will fly over a greater area of the earth's surface and there is a remote possibility that, some future date, a spacecraft might make an emergency landing in a tropical area.

The course of instruction was presented by H. Morgan Smith, Director of the Tropic Survival School, and the staff of the school. The course included classroom instruction on a variety of subjects including identification of poisonous tropical plants, their location, safety precautions and first aid; identification of edible plants and fruit, location, and method of preparation prior to eating; identification of animals, reptiles and birds in the tropics, their habits, location, likelihood of attack, palatability, and safety precautions.

The course also included instruction of indigenous people in the tropic areas, native customs, native foods and the proper method of approaching these people, enlisting their aid, and communication with them.

The group spent three days and two nights in the jungle and during this phase of training they were sent out as two-man teams with no team within sight or hailing distance of another. One instructor was assigned to monitor the

Add 2
MSC 63-96

activities of two teams. Field activities included the establishment of campsites, including building shelters of native products, gathering dry wood, water purification, fishing, hunting, gathering edible plants, and the construction of a two-man raft by each team.

In addition, each man was required to build and set one trap and to construct and try a hammock.

In order to make the training as realistic as possible, and to give the astronauts the full benefit of the experience in the event of any future contingency, the group, after arrival in the jungle, was dressed only in boots and long underwear - the garb they would wear in the event of a jungle landing. In all manned space flights the pilots wear long underwear under their pressure suits and the suits would have to be discarded after such a landing.

Strict conservation principles were adhered to by the personnel participating in the program with vegetation cut only to serve a definite purpose and maximum use made of animals killed.

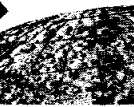
The group returned to Albrook late Thursday afternoon and the training program concluded with a debriefing at the survival school headquarters.

###

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT
CENTER



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-99
June 10, 1963

HOUSTON, TEXAS -- A Manned Spacecraft Center public affairs officer will discuss "Manned Space Flight and Education" in Norman when he addresses the University of Oklahoma's Aerospace Education Workshop on June 13.

John J. Peterson, Chief of the News Communications Branch at the National Aeronautics and Space Administration's Houston manned space flight center, will outline the future MSC Gemini and Apollo programs, and will discuss their resulting impact on education.

The two-man Gemini flights, to begin in 1964, will develop pilot techniques in docking and rendezvousing in space, and will study long duration flights of up to two weeks in weightlessness. Apollo flights within this decade will ultimately land two U. S. astronauts on the moon. Peterson's address will conclude with the showing of a 14-minute film on Project Apollo, entitled: "The United States Manned Lunar Expedition".

A retired United States Army officer with 22 years of service, Peterson worked as a military and space writer for the Daily Press in Newport News, Virginia. He joined MSC in April, 1961, where he is responsible for the release of information on manned space flight programs to local, national and world-wide news media.

Add 1
MSC 63-99

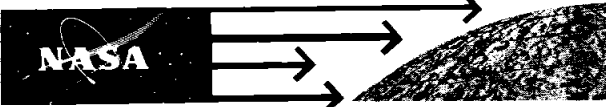
During manned space flights from Cape Canaveral, Peterson operated the Mercury News Center as its manager, disseminating information to news media on the progress of five of the six flights. For the flight of "Sigma 7", as Astronaut Walter M. Schirra, Peterson directed the operation of the Pacific News Center in Honolulu.

###

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT
CENTER



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-97
June 10, 1963

HOUSTON, TEXAS -- A Houston printing company is one of three firms awarded small business contracts totaling \$246,000 by the Manned Spacecraft Center for printing and reproduction services.

Winning bidders, selected from 22 companies submitting proposals, are: Wetmore and Company, Houston, with a contract for \$188,917; Pacific Reproduction Service, Inc., Santa Maria, California, for \$50,500; and Texas Repro-Center, Washington, D. C., for \$6,397.

Services to run through June 30, 1964 will supplement existing Center facilities, and will include composition, offset printing, publications, snapout printed business forms, and direct print type services, such as blue line, black line, and ozalid reproductions.

Performance of work will be under the technical direction of N. S. Jakir of MSC's Printing and Publications Distribution Branch. Joseph T. Davis, contracting officer in MSC's Support Procurement Branch, will monitor all aspects of contract administration.

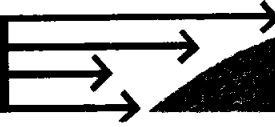
###

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT
CENTER

NASA



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-98
June 12, 1963

HOUSTON, TEXAS -- A Martian "taxi" to ferry U. S. astronauts between an orbiting spaceship and the surface of the planet Mars will be investigated by Ford Motor Company scientists under terms of a \$99,512 contract negotiated recently with the National Aeronautics and Space Administration's Manned Spacecraft Center, Houston, Texas.

Ford's Aeronutronic Division will conduct the study.

Technical responsibility for the program has been assigned by Aeronutronic to Dr. Franklin P. Dixon, manager of Advanced Space Systems for Engineering.

Aeronutronic will study the requirement for a Mars Excursion Module (MEM), a vehicle carried by a larger spacecraft and designed to taxi astronauts between it and the planet Mars, around which the larger spacecraft would be orbiting.

In a Mars mission, perhaps in the middle of the next decade, such a vehicle could land several astronauts on the planet for exploration, remaining there for perhaps as long as 40 days before returning to the mother spacecraft for the return voyage home.

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT
CENTER



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-100
June 12, 1963

HOUSTON, TEXAS -- A contract for \$35,767 to study environmental control and life support requirements for a manned, earth-orbiting space station has been awarded the Hamilton Standard division of United Aircraft Corporation by the National Aeronautics and Space Administration.

The six-month study for NASA's Manned Spacecraft Center, Houston, Texas, is aimed at establishing design approaches for advanced environmental control systems to support a 24-man space station orbiting continuously 200 to 300 miles above the earth. Duration of the orbital flight would be from one to five years.

Two space station concepts are being considered in the NASA study: an artificial gravity, three module rotating space station; and a zero gravity, non-rotating one module station. Feasibility of providing each module of the three module space station with an environmental control-life support system will be investigated as part of the study.

Being conducted by Hamilton Standard's space and life systems department, the study will also cover storage of mixed oxygen-nitrogen supply, atmospheric and thermal control, water and waste reclamation or storage, oxygen reclamation

Add 1
MSC 63-100

from carbon dioxide, integration of crew space suits to the space station system, instrumentation and controls. Weight, volume, and power requirements for each environmental control-life support system will also be determined.

Hamilton Standard presently is developing space suit and portable life support systems for NASA's Apollo moon-landing program. It has also been selected by Grumman Aircraft Engineering Corporation to provide the environmental control system for the Apollo lunar excursion vehicle.

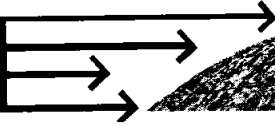
###

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT
CENTER

NASA



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-101
June 12, 1963

HOUSTON, TEXAS -- Dr. Robert R. Gilruth, Director of NASA's Manned Spacecraft Center today expressed surprise and regret over the resignation of Mr. D. Brainard Holmes, Director of Manned Space Flight, for NASA in Washington, D. C.

Walter C. Williams and James C. Elms, Deputy Directors at MSC joined Gilruth to tribute to Holmes and to his many contributions to the progress of the nation's manned spaceflight research effort. All three agreed that Holmes has an unusual talent for blending the technical complexity of the research and development effort into the operational flight requirements to produce a solid team effort and an successful manned space flight.

"We are realigning our effort to meet our existing Gemini and Apollo flight schedules," Gilruth said, "but we will miss the perceptiveness and knowledge and drive of Brainard Holmes in Washington."

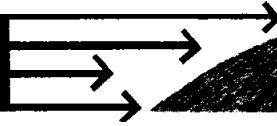
###

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT
CENTER

NASA



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-102
June 13, 1963

HOUSTON, TEXAS -- Manned Spacecraft Center, the agency charged with selection and training of the National Aeronautics and Space Administration's astronauts, is making its broadest effort to see that no qualified person is overlooked in selection of the third group of astronauts.

NASA has issued a nationwide call for volunteers for the pool of astronauts to man spacecraft in flights in the Gemini and Apollo programs. Ten to 15 new astronauts will be selected to join the NASA program in the Fall, the space agency said.

In seeking additional astronauts, Manned Spacecraft Center has broadened its recruitment in two ways. One of these ways is a change in the criteria for selection, the major effect of which is to eliminate the need for a test pilot school certificate, although possession of one is still preferred.

In addition to this, the Center is spreading its call for volunteers throughout the nation by requesting recommendations of qualified men from a large number of organizations which normally possess knowledge of professional pilots meeting the criteria for astronaut selection.

For instance, letters asking for recommendations have been sent to the commanders of Air National Guard units of the 50 states and to various reserve organizations. As in the past, the nation's military services have been asked to find and recommend from among its personnel men who are qualified for astronaut training.

Letters asking for recommendation have also gone out to industrial firms, professional groups and other organizations located throughout the country.

Among the organizations contacted are The Boeing Company, Seattle, Wash; Douglas Aircraft Company, Santa Monica, Calif; General Dynamics Corporation, New York; Lockheed Aircraft Corp; Burbank, Calif; General Electric Company, New York; Northrop Space Laboratories, Hawthorne, Calif; Republic Aviation Corp, Farmingdale, N. Y. ; McDonnell Aircraft Corp., St. Louis, Mo; Westinghouse Electric Corporation; Pittsburgh, Pa; Grumman Aircraft Engineering Corp, Bethpage, N. Y. ; Ling-Temco-Vought, Dallas, Texas; the Society of Experimental Test Pilots, Lancaster, Calif; the Airline Pilots Association, Chicago, Ill; the Federal Aviation Agency, Washington, D. C; and three NASA field centers which utilize pilots in their work, Langley Research Center, Hampton, Va; Edwards Flight Research Center, Edwards, Calif; and Ames Research Center, Moffett Field, Calif.

Other qualified volunteers may apply for consideration directly to Manned Spacecraft Center in Houston, officials said.

Add 2
MSC 63-102

Pilots selected for the astronaut pool will join the program at Manned Spacecraft Center in October. They will be incorporated into the group of 16 now in training for the Gemini Earth orbital and rendezvous space flights and the Apollo lunar landing flights.

To qualify for this selection, a candidate must:

1. Be a United States citizen born after June 30, 1929 and 6 feet or less in height.
2. Have earned a degree in engineering or physical sciences.
3. Have acquired 1,000 hours jet pilot time or have attained experimental flight test status through the Armed Forces, NASA or the aircraft industry.
4. Be recommended by his present organization.

NASA also announced that conversation will be begun with representatives of the nation's scientific community with regard to finding the earliest practicable ways in which scientists can be included in the Apollo mission.

In addition, successful applicants will have to be in excellent physical and mental condition.

Applications are to be addressed to the Personnel Officer, P. O. Box 18534, Houston 23, Texas. Civilian applications must be postmarked no later than midnight July 1, 1963.

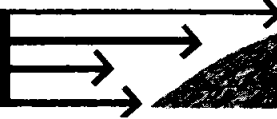
###

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT
CENTER

NASA



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-103
June 18, 1963

HOUSTON, TEXAS -- The NASA Manned Spacecraft Center has hired 190 college students and professors for temporary positions during the summer months.

The students were selected from about 800 applicants representing colleges throughout the country.

Most of the students are involved in scientific and engineering work, but some have business and public administration jobs.

Seventeen of the new MSC employees are assigned to other installations of NASA. Thirteen of these will go to Cape Canaveral, Florida; three to White Sands, New Mexico; and one to Downey, California.

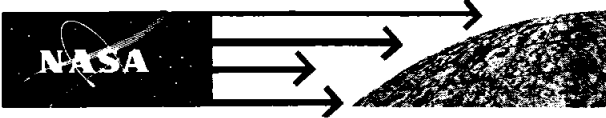
They have started reporting for work and by June 30 they will all be on the job.

###

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNNED SPACECRAFT
CENTER



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-104
June 19, 1963

Houston, Texas -- The man responsible for planning recovery support of all manned space flights, including Astronaut L. Gordon Cooper's recent 22 revolutions around the Earth, will be the principal speaker on June 26 at the University of Southern Mississippi at Hattiesburg.

Robert F. Thompson of the National Aeronautics and Space Administration's Manned Spacecraft Center will discuss "Tracking, Search and Rescue Procedures" and "Past and Future Programs of Manned Space Flight".

The Fourth Annual Aviation Education Workshop, from June 24 to July 10, is designed to keep educators abreast with space and aviation. Sponsored by the Mississippi State Department of Education, various aviation interests, the military services and NASA, the workshop programs will eventually reflect in the development of the Mississippi elementary and secondary school curricula.

Born in Bluefield, Virginia, 38 years ago, Thompson attended Bluefield high school in 1941, and later, the Virginia Polytechnic Institute (VPI), where he received a bachelor of science degree in aeronautical engineering in 1944. Upon completing his education he served as a line officer with the U. S. Navy, from January 1945 to September 1946.

Add 1
MSC 63-104

Thompson joined the Langley Research Center science staff of NASA (at the time, NACA, for National Advisory Committee for Aeronautics) in March 1947, and was assigned to stability research at Langley's 7 x 10-foot wind tunnel. In January, 1959, he was transferred to the Space Task Group, forerunner to the Manned Spacecraft Center, now located in Houston, which has the national responsibility for landing two U. S. astronauts on the moon before 1970. The manned spaceflight center, having completed six successful manned Mercury missions, is now engaged in preparations for the two-man Gemini space flights, to begin in late 1964, which will develop pilot techniques in docking and rendezvousing with another vehicle in space, and in long duration flights of up to 14 days under weightless conditions.

During his early NACA career, he became known for his work in aircraft aerodynamic controls and for his studies of control flutter phenomena.

In August 1959, Thompson was named Head of the Flight Operations Division Recovery Branch. In this capacity, he works closely with the Department of Defense which provides support elements for location and retrieval of spacecraft after its landing in abort areas near the launch site, in planned areas of the North Atlantic or in emergency or contingency areas around the world. In addition, his branch engaged in operational and research testing to develop new recovery equipment and techniques for all Manned Spacecraft Center flight activities.

Add 2
MSC 63-104

Thompson is married to the former Dorothy Pritchett of Bluefield, Virginia. With their two children, the Thompsons reside near Houston, Texas.

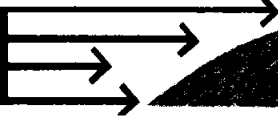
###

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT
CENTER

NASA



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-105
June 20, 1963

HOUSTON, TEXAS -- Faced with the challenge of sending men to the moon and returning them before the end of this decade, NASA's Manned Spacecraft Center has developed two programs to recruit talented personnel in support of its mission.

This week thirty-seven top-ranking college students and recent graduates started work in these programs.

Twenty-seven comprise the first Aerospace Summer Intern Program. Initiated by MSC, this plan gives outstanding students an opportunity to correlate experience with academic training.

The remaining ten are graduates who make up the second annual Management Intern Program. Their administrative apprenticeship lasts one year, while the summer program is for a 75-day period of employment.

The Summer Interns were selected from among undergraduates who have completed their junior year, and from graduate students planning to return to school for graduate work.

Add 1

SC 63-105

They have all attained a "B" average or better and have been recommended by the Dean of their college. They represent schools and universities in thirteen states.

As well as working in their major field for the summer, the interns will attend seminars within the Center.

The 17 scientific and engineering summer interns have a one hour class daily in Spacecraft Engineering, Design, and Operation. This course has been developed by senior technical staff members of MSC and will constitute a special course based on experience and data gained to date from the Mercury, Gemini and Apollo projects.

There are ten summer interns in public and business administration fields. They will attend a weekly two-hour seminar comparable to graduate courses in management theory.

The summer program will benefit MSC in recruiting exceptional graduates and improve communications between colleges and NASA.

The students will bring new ideas and classroom techniques to MSC; and when they return to school this fall, they will take back a first hand knowledge of MSC and its projects.

Concurrent with the appointment of the summer interns, ten Management Interns started their first week of work. They are all graduates in business administration fields and eight have done graduate work.

-
Add 2
ISC 63-105

For four and one-half months they will be assigned to rotational training in such departments of management as personnel, security, procurement, management analysis, and other administrative offices.

During this period the interns familiarize themselves with MSC and get an overall view of the programs. For the remaining seven and one-half months of internship, they will be assigned to a specific job in an area visited in rotational training.

The first group of seven management interns who began in July, 1962, will complete their year of intern training this month and will move to a permanent assignment.

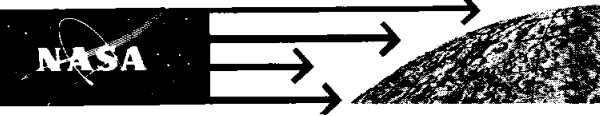
← The assignments include positions as budget analysts, price analysts, contract specialists, personnel management technicians, or administrative officers.

###

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNNED SPACECRAFT
CENTER



**Houston
1, Texas**

Walnut 8-2811
Extension 3751

MSC 63-106
June 22, 1963

From sailing on Lake Huron and the University of Toronto to landing two Americans on the moon - that's been the course of destiny for a native Sarnian.

As a youngster he built airplanes and today he guides the design of the systems that go into the NASA Lunar Excursion Module (LEM) for the Manned Spacecraft Center in Houston, Texas.

Owen E. Maynard, a 38 year-old aeronautical engineer, is the acting manager of Spacecraft Systems for the LEM in the Apollo Project Office.

Maynard joined the space program in 1959 after working for Avro Aircraft of Canada. He worked on the first Mercury (unmanned) flight and was responsible for the engineering of the capsule and the recovery operation.

After this he began conceptual design work for Project Apollo. His branch made the early design studies for the command, service and lunar excursion modules of Apollo.

Add 1
MSC 63-106

The 12 ton, 15 feet high LEM will detach itself from the service and command modules while orbiting the moon. With two astronauts inside, it will land its fire skid type legs on the moon.

Owen Maynard, his wife, the former Helen Richardson of New Toronto, and three children exemplify a "NASA family." They are all equally devoted to the Apollo program.

When they were transferred from Langley Research Center to Houston last year, they dutifully left friends and relatives behind in Virginia to follow the program.

The three children, ages 6, 8, and 11, are as excited about space as Dad. The eldest, Donald, hoped to be the world's youngest astronaut.

"He wanted me to ask John Glenn if he could ride with him on his flight," Maynard recalls. "He promised that he would sit in the back seat of the capsule and be very quiet."

At the time of Alan Shepard's sub-orbital flight (May 5, 1961) the children built their own Mercury spacecraft out of boxes.

Maynard, who served in the RCAF for three years during World War II, said, "they used my old air force helmet and oxygen masks and drilled a hole in the side of their homemade 'mercury' to breathe."

They climbed into their Mercury as Shepard got into his and remained there until his recovery.

Add 2
MSC 63-106

The Maynards have adjusted to the Houston climate thanks to air conditioning and swimming. They are building a home in the residential community of Friendswood, Texas.

Friendswood reminds Mrs. Maynard of Frankfort, Ontario, where she spent her summers as a teenager. The house that they have designed together will be completed in July. The one-acre tract includes a shady pecan orchard and a creek. The creek runs into Clear Lake where Maynard hopes to pursue his favorite sport -- sailing.

As Maynard is busy building his new home, so is the Manned Spacecraft Center - about seven miles away at Clear Lake.

MSC, temporarily housed in Houston, is constructing a giant complex at a budgeted cost of \$120 million. The facilities are scheduled for completion in 1964.

###

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
MANNED SPACECRAFT CENTER  Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-107
June 26, 1963

HOUSTON, TEXAS -- Animated lights to illustrate operational flow patterns on classroom-size systems diagrams are teaching astronauts and engineers of the Manned Spacecraft Center the inner-workings of the Gemini spacecraft.

The Gemini systems trainers, now located at MSC's training site at Ellington AFB, pictorially show how each system works. Schematically, they lay out on a flat, upright board each major spacecraft system. Upon initiation of a system, the schematic board lights up to display a operational flow pattern through lights traveling from component to component throughout the system. Opening a switch, for example, can simulate a malfunction in that component, and the signal flow, in choosing an alternate route, illustrates to the "student" the automatic switchover which actuates itself, or the manual switchover which he, as pilot, must initiate.

The student can also study the type of component failure, or the possibilities that could render a component inoperative, by observing the physical makeup of the component through its schematic layout, or its location along the signal flow

route.

- more -

Add 1
MSC 63-107

Engineers, checkout and operations personnel plan to use the systems trainers extensively.

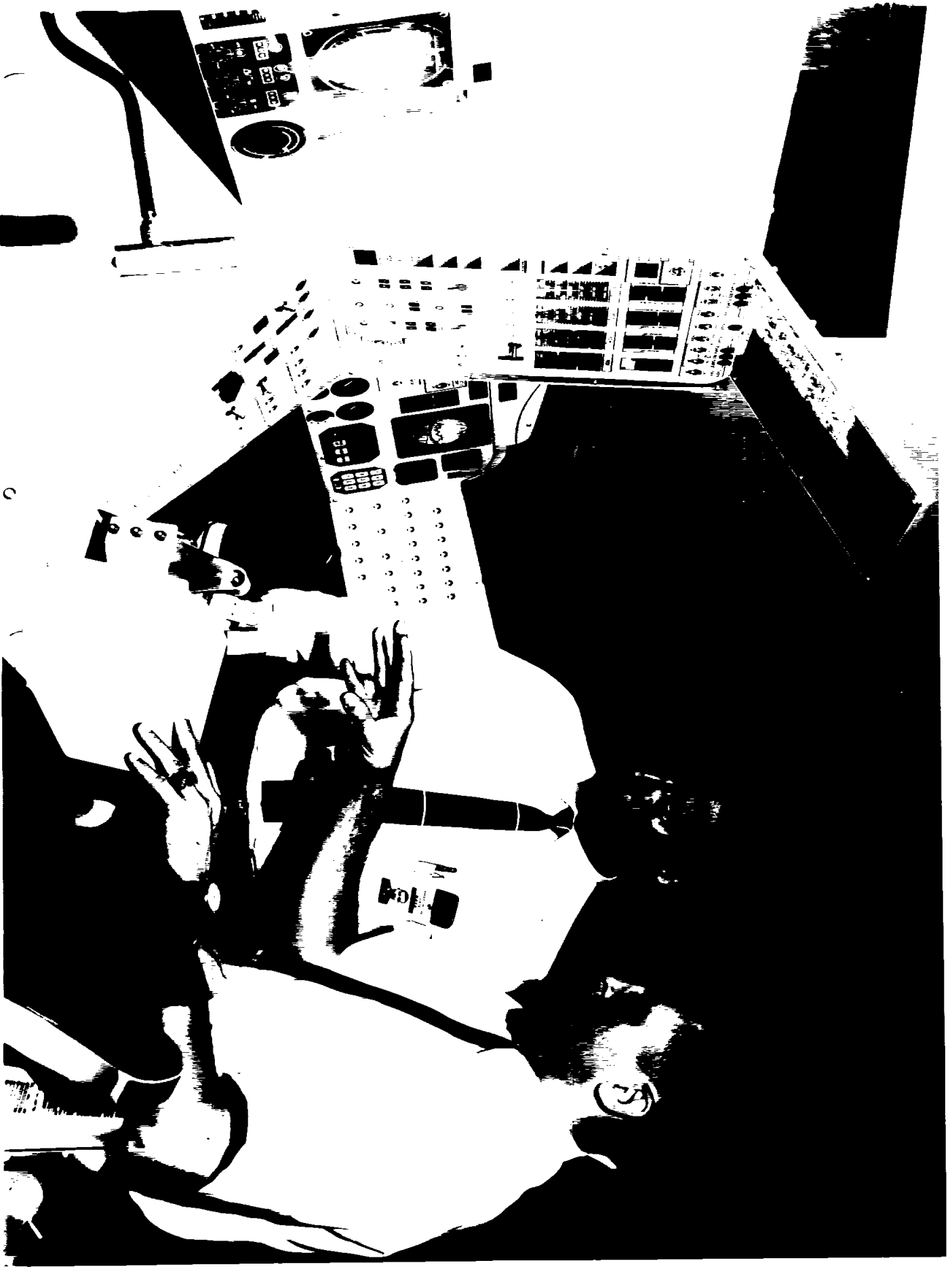
First of any Gemini trainers to arrive in Houston, the teaching aids display such major systems as electrical power source flow provided by the fuel cells and back-up batteries; the entire electrical system sequential system, or the electrical sequence of events from lift-off to landing; the environmental control system (ECS) coolant circuit for cooling spacecraft equipment, the cabin and pilot; the ECS oxygen circuit for cabin, and for pilot main and emergency supply; and the attitude and maneuver control system (propulsion) circuit for orbital and reentry directional control. A pilot's console displaying the layout of the Gemini cockpit instrument panel is equipped with a spacecraft control stick to actuate the attitude and maneuver control circuits.

Project Gemini two-man space flights, scheduled to begin in late 1964, will develop piloting techniques in docking and in rendezvousing in space, and will study the effects of long duration flights - up to 14 days - on men in a weightless environment. Often called the training ground for later, more ambitious Apollo flights, Gemini will lead to the national goal of landing two U. S. astronauts on the moon. Project Apollo's lunar landing is scheduled sometime before 1970.

The Gemini systems trainers were built for McDonnell Aircraft Corporation, the prime contractor to NASA for the Gemini spacecraft, by Burtek, Inc., of Tulsa, Oklahoma.

###

NASA
S-68-0342



PROJECT APOLLO BRIEFING

Aerospace Writers' Association Convention

May 24, 1963

Dallas, Texas

by: William F. Rector, III
Assistant Manager
LEM Engineering Office
Apollo Spacecraft Project Office
Manned Spacecraft Center
National Aeronautics & Space Administration
Houston, Texas

INTRODUCTION

The Apollo Spacecraft Project has been in existence for approximately three years and considerable progress has been made. A significant milestone was reached earlier this year with the awarding of the contract for the Lunar Excursion Module (sometimes referred to as the LEM) to the Grumman Aircraft Engineering Corporation. The award of this contract completed the selection of the major industrial team members that will carry out the Apollo Project. Concurrent with this completion of the selection of the industrial team, flight tests of full-scale Command and Service Module hardware have begun. As the emphasis starts to shift to flight testing, it is interesting to briefly recapitulate chronologically the activities of the Project to date.

There are two areas which require particular attention during the early development of any project. These areas are the evolution of the mission and mission mode, and the evolution of the spacecraft configuration. The mission evolution of Apollo is depicted very briefly in the first slide.

SLIDE 1 - PROJECT APOLLO

The Mercury Project was officially announced in the latter part of 1958. Less than two years later, in July, 1960, the NASA announced, after many preliminary studies and committee actions, that the next manned space flight program would be a three-man lunar mission, and was given the official designation of Project Apollo.

At this time, however, it was stated that the primary objective of Project Apollo was a circumlunar reconnaissance mission. It was recognized then that prior to a lunar landing mission, some type of a reconnaissance mission would be desirable. In addition, the planned launch vehicle payload capability at the time was 16,000 pounds, which limited the mission to circumlunar. Studies in this time period, from July, 1960, to May, 1961, therefore, dealt primarily with a circumlunar mission and the associated spacecraft.

In May, 1961, shortly after the first manned Mercury flight of Astronaut Alan Shepard, the President announced his decision that the United States would carry out a manned lunar-landing mission within this decade.

From May, 1961, until November, 1961, a period of intense study was in progress which culminated with the decision to develop the Saturn C-5 (S-V) launch vehicle. This decision meant that the direct-landing, single launch vehicle mission would not be carried out. It was assumed at the time that the mode would be earth orbital rendezvous. For the period of time from late 1961, until mid-1962, studies dwelt on two

things: how the spacecraft would be developed and operated to carry out the mission where the complete spacecraft landed directly on the moon, or, alternatively, the lunar orbital rendezvous technique where only a portion of the spacecraft was landed on the lunar surface. In the middle of 1962, after such studies were made by various groups, the decision was made to use the lunar orbital rendezvous mission.

The spacecraft has evolved parallel to the evolution of the mission and mission mode. The next slide presents the spacecraft configuration as it appeared at various times.

SLIDE 2 - SPACECRAFT CONFIGURATION EVOLUTION

On the far left is a sketch which was put in the original study work statement. At that time, it was thought that the spacecraft would probably be in three modules, including a reentry module; a module with space propulsion capabilities for maneuvering; and, possibly, a module related to the specific mission that the vehicle was carrying out. During the first study period, considerable effort was directed toward the reentry module. At the bottom of the slide are shown four shapes that received considerable attention. The configuration on the right was the one subsequently selected as the Command Module. This module configuration has remained constant during the evolution of the spacecraft, along with the launch escape tower. In the early studies, the propulsion module was geared mainly to an abort capability, rather than lunar landing. After the lunar landing decision was made in May, efforts to evolve a system for

lunar landing were intensified. The first such effort which appeared in the July 1961 work statement is shown on the slide. It consisted of a landing or descent stage of hydrogen-oxygen and an ascent stage of a cluster of solid rockets and liquid verniers. By the end of 1961, when the contract was awarded to North American Aviation, the configuration (identified as December, 1961) had been evolved; namely, a single engine liquid-propulsion system for the Service Module which would be used for lunar launch. The landing stage had evolved in detail, but was still a large hydrogen-oxygen stage. In order to reduce some of the problems associated with landing this very large stage on the moon, the decision was made to break this stage in two parts, as shown on the slide. The lower portion (identified as April, 1962) would provide the primary propulsion during the descent to the lunar surface, but would be jettisoned prior to touchdown. The second stage, with landing gear, would provide the propulsion for the hovering and landing, itself; and then the upper stage or Service Module would be the launch stage. That was in April, 1962. At the same time, however, studies were continuing on the LEM and the decision was made that the LEM would be the route taken. The last configuration was evolved in July, 1962, and this is the overall configuration that is being worked on today.

The next slide shows in more detail the Apollo Spacecraft configuration we are presently developing for the lunar landing mission.

SLIDE 3 - APOLLO SPACECRAFT

The Launch Escape System, as in Mercury, is used for possible aborts during the early phases of the earth launch. It will normally be jettisoned soon after the first stage of Saturn has done its job.

The Command Module houses the entire crew during all phases of the mission except during the LEM operation. It has a diameter of approximately 13 feet and a height of about 13 feet and will weigh approximately 5 tons.

The Service Module houses the propulsion system needed to get the spacecraft in and out of the lunar orbit or can be used for aborting during certain phases of the mission. It uses hypergolic fuel and will weigh approximately 25 tons.

The Lunar Excursion Module will be housed in an adapter section below the Service Module and above the top stage of Saturn V. The legs of the LEM and the touchdown engine assembly will serve a dual function - for letdown and as a launch pad for lunar take-off. The LEM will weigh approximately 15 tons.

We have seen the evolution of the mission, mission mode and spacecraft. The next slide shows the design mission we have established for the development of the Spacecraft. This mission profile only establishes the capabilities of the spacecraft and does not attempt to get into a specific mission which will result from future, more detailed planning.

SLIDE 4 - MISSION PROFILE

The Apollo Spacecraft weighing approximately 45 tons is launched from Cape Canaveral by the Saturn V Launch Vehicle and has the capability of orbiting the earth prior to departure for the moon. This allows a greater launch time flexibility.

The Spacecraft is inserted into a translunar path by the final stage of the Saturn V vehicle. The Service Module Propulsion System provides a retro-thrust which slows the Apollo Spacecraft down into a circular orbit around the moon.

At this point, the LEM with two of the crew members aboard separates from the remainder of the Spacecraft and performs the landing maneuver. The Command and Service Modules remain in the circular orbit. The LEM goes into an equi-period orbit during the landing which means that if the landing cannot be made the LEM automatically returns to the Command and Service Module. The shaping of the lunar landing trajectory in this manner provides an additional crew safety feature.

After the lunar stay-time, the LEM is launched into a 50,000 foot circular orbit. Normally the LEM will then transfer from the 50,000 foot circular orbit to the orbit of the remainder of the Spacecraft and perform the rendezvous and docking. However, the Spacecraft is being so designed that the Command and Service Modules could transfer to the lower altitude orbit and successfully rendezvous with the LEM. This type of design planning provides us with one more crew safety feature.

After the two crew members transfer to the Command Module, the LEM is jettisoned and the Service Module Propulsion System provides the necessary thrust to place the Spacecraft in the proper return path. The Service Module is jettisoned just prior to the reentry into the earth's atmosphere and the Command Module is the only part of the Spacecraft that returns to the earth's surface. I will show later in a film how the actual landing on the earth will take place.

Like Mercury, there are many more elements besides the Spacecraft that are required to successfully accomplish this complex mission. The major elements of the Apollo System are shown in the next slide.

SLIDE 5 - APOLLO SYSTEM ELEMENTS

First is shown what is normally referred to as the Apollo Space Vehicle. It consists of two parts, the Spacecraft and the Launch Vehicle. Shown located at Cape Canaveral is the Launch Control Center. This can be thought of as the blockhouse and preparation facilities. Located in Houston, Texas, is the Mission Control Center which will control the flight after launching. The Mission Control Center for Project Mercury is located at the Cape, but the Apollo Center has been located at Houston for several reasons. One of these is the vast amount of NASA personnel located in Houston who will be required during a flight which is days now instead of just hours. In addition, a large computing facility is required in support of the training of the flight crew in simulators prior to each flight. This is to be done in Houston.

A large computer is required for the actual flights, so these two functions have been combined here in Houston, Texas.

Essential elements for completing a mission are the many stations that make up the entire tracking network. The Apollo requirements are more stringent than those of Mercury, since in addition to a system for tracking the Spacecraft near the earth, tracking of the Spacecraft to the moon is also needed. These tracking facilities are all tied back to the Mission Control Center.

Finally, we have shown an aircraft carrier for the recovery phase, but the primary landing sites for Apollo will be on land. However, the Command Module is being designed to land safely on either land or water, as you will see later in the short movie. We are always striving in our advanced programs to improve the landing capabilities of each Spacecraft system so one day we will in fact be able to land hopefully at ordinary airports and not require such large recovery forces.

The next slide indicates what organization within the NASA is responsible for these various elements.

SLIDE 6 - PROGRAM SYSTEMS RESPONSIBILITY

The overall responsibility for the Apollo Program is the Office of Manned Space Flight in Washington, D. C. The Spacecraft is the responsibility of the Manned Spacecraft Center, the Launch Vehicle is the responsibility of Marshall Space Flight Center, the Launch Control Center is the responsibility of the Launch Operations Center, the Mission Control Center is the responsibility of the Manned Spacecraft Center and finally

the Tracking Network is the responsibility of the Office of Tracking and Data Acquisition who receive support from Goddard Space Flight Center and Jet Propulsion Laboratories.

The next slide indicates a few of the major contractors now onboard in the development of the Apollo Spacecraft.

SLIDE 7 - SPACECRAFT CONTRACTORS

NAA has been onboard for approximately 18 months now and pieces of hardware are beginning to roll out the door and early developmental tests have begun. Since you will be hearing much of these tests in the very near future, I would like to take this opportunity to briefly describe some of these tests and show some film clips of our early efforts.

SLIDE 8 - TEST PROGRAM

This indicates the major areas of the Apollo Test Program. There is a tremendous amount of the actual flight that we can simulate on/or near the earth. The test program has been developed around this fact so that maximum confidence can be established prior to the actual flight.

The major areas are:

- Ground Tests
- Pad Abort Simulations
- Sub-Orbital Abort Simulations
- Earth Orbital Velocity Tests

• Lunar Velocity Tests

I will discuss these in more detail on the next few slides.

SLIDE 9 - MAJOR GROUND TESTS

The ground tests are similar in nature to those accomplished during the development of Project Mercury, such as, structural static, vibration/acoustic, etc.

The environmental testing on Project Mercury was of extreme importance, for in these tests by real time simulation the NASA was able to establish that the Mercury Spacecraft could stay longer than 4 hours in orbit. This resulted in the recent 22 orbit flight of Astronaut Gordon Cooper.

The Impact Tests are performed to substantiate the adequacy of the design of the landing systems. The movie will show some of these tests.

Ground tests are also performed to establish data on the various subsystems and the compatibility of the various modules, such as the docking interface between the LEM and the Command Module.

Finally, effort is being made to develop the necessary testing technique required to simulate the landing conditions on the moon for the LEM.

SLIDE 10 - PAD ABORT FLIGHT SEQUENCE

One of the tests coming up in the near future is the launch pad abort test. As in Mercury, this would be the condition when a failure has

occurred in the Saturn launch vehicle close to lift-off and the launch escape system is required to safely remove the Command Module away from the trouble. The purpose of this test is to qualify the Launch Escape System and its associated sequencing.

Significant Data:

Thrust - 155,000 pounds

Pitch Control Motor

Tower Jettison Motor - 33,000 pounds for 1 second

Apex Heat Shield - 40,000 feet

13 foot Drogue Chute - 25,000 feet

3 - 85 foot Main Chutes - 15,000 feet.

SLIDE 11 - MAX Q ABORT FLIGHT SEQUENCE

This sequence indicates another test to be accomplished soon with the objective of further development and qualification of the Launch Escape System and qualification of the Command Module Structure. This test differs from the pad abort in that this is accomplished under the condition of maximum dynamic pressure.

Since the maximum of pressure occurs during the first stage burning of Saturn, we have to be able to reproduce this condition by some means other than the Saturn due to the expense of using a Saturn and the requirements for accomplishing this test early in the program. That is the reason for the development of the Little Joe II launch vehicle. It

is a simple and cheap means by which we can qualify the LEM and Command Module Structure under this severe loading condition.

Altitude - Approximately 20,000 feet.

SLIDE 12 - ORBITAL VELOCITY TESTING

Briefly, here are some of the tests that will be performed in earth orbit using the Saturn I and Saturn IB launch vehicles. They are separated into two areas; 1) Pre-Manned Tests and 2) Manned Tests.

On early Saturn development flights, there will be heavily instrumented "boiler plate" spacecrafts with the objective of determining the launch environment. These early flights will also be used to qualify the Emergency Detection System which is the "brain" required to tell the crew or the ground when the launch escape system should be used.

These early unmanned flights will also establish the flight compatibility of the Launch Vehicle and the Spacecraft. These tests will use an actual adapter and spacecraft structure.

And finally, all subsystems that are required for meeting flight safety will be qualified in these tests so we will know that we have a safe spacecraft before we insert the crew.

The Manned Tests will consist basically of the qualification of the remaining subsystems and the development of operational techniques.

SLIDE 13 - ORBITAL/LUNAR VELOCITY TESTING

These tests are those schedule for the Saturn V launch vehicle.

The first test shown is the reentry qualification flight. This will be the first flight in which we will be able to subject the Command Module to lunar velocity conditions and simulate actual reentry with a full scale vehicle.

In earth orbit we will demonstrate the operation of the complete Spacecraft fully fueled.

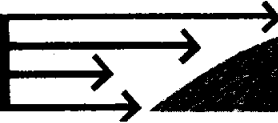
Finally, we will simulate in earth orbit the complete lunar landing mission.

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNNED SPACECRAFT
CENTER

NASA



Houston
1, Texas

WAInut 2-2811
Extension 3751

MSC 63-108
June 26, 1963

HOUSTON, TEXAS -- A frictionless platform to simulate five degrees of freedom, or the forces exerted by an astronaut working in free space, is being developed for the Manned Spacecraft Center in Houston.

Built by the Martin Company, Baltimore, Md., under contract to MSC for \$22, 300, the frictionless platform will be used by MSC's Crew Systems Division to test and evaluate space suits, stabilization devices, tethering lines, and space maintenance tools.

In space, a force applied in one direction is realized with an equal force in the opposite direction. For example, an astronaut about to tighten a bolt in a weightless environment may find himself being torqued instead. This "reaction" in five different directions is simulated by the Martin frictionless platform.

The simulator, weighing about 175 pounds, is lifted from the floor on a cushion of compressed air. This pressurized air forced through three legs suspends the simulator 0.005 of an inch from the floor. Twenty-one pounds of

Id 1
MSC 63-108

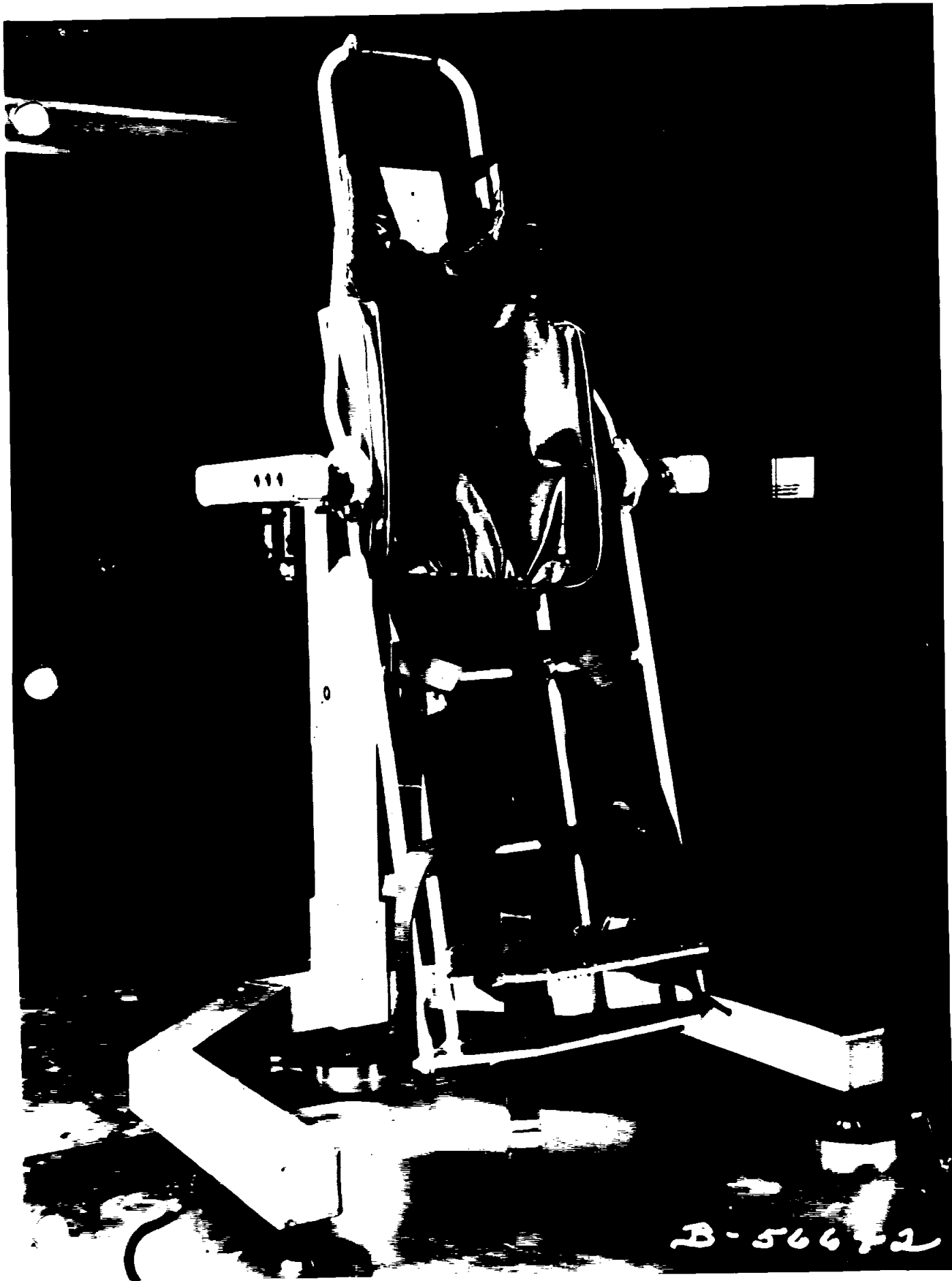
pressure per square inch (psi) is required to lift the simulator and an additional 300 pounds, or the equivalent weight of a subject wearing a space suit with a portable environmental control system (ECS) back-pack. An increase in pressure automatically increases the simulator's load-carrying capability. As much as 500 pounds has been lifted by the simulator.

The simulator duplicates five degrees of freedom -- pitch, yaw and roll, and two on the horizontal plane (forward-backward, side-to-side). It can rotate and roll a full 360 degrees. A sixth degree, on the vertical plane (up and down), may be added later by MSC through auxiliary equipment. One method could be through a space maintenance practice console which would react on the vertical plane from an applied force by the subject.

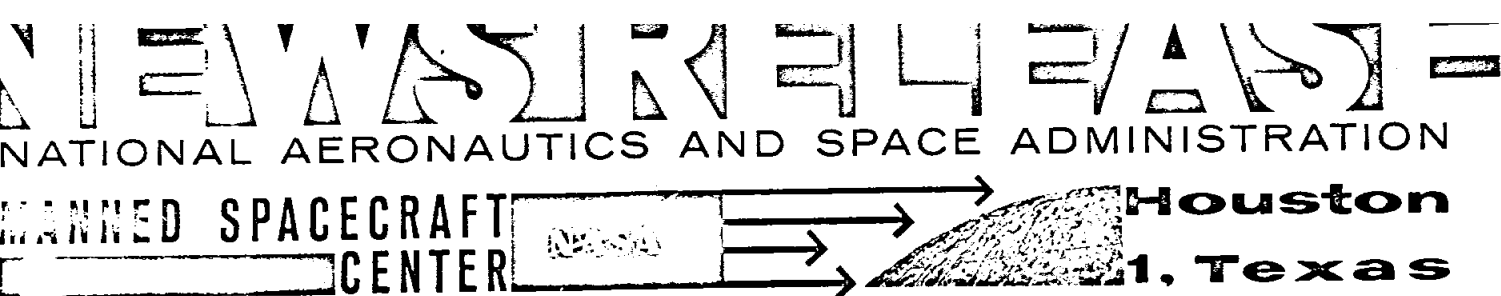
Capable of duplicating only the first moments of the reaction to a force applied by the subject in free space, the simulator cannot overcome the one-gravity pull of the earth. For this reason, the device cannot truly duplicate weightlessness. The simulator, however, floats so freely on its cushion of air that the slightest movement of the subject will cause a reaction -- usually in the opposite direction, and for all practical purposes, creates the working problems the astronaut encounters in an unrestricted, weightless environment.

The frictionless platform is scheduled for delivery to MSC late in 1963.

###



B-56672



Walnut 8-2811
Extension 3751

MSC 63-109
July 3, 1963

HOUSTON, TEXAS -- The rolling Pacific stretched out to the horizon under a cloudless blue sky. All eyes aboard the USS Kearsarge were strained to an empty spot in the heavens. The ship's radio was blaring out the latest world news.

At this moment on October 3, 1963, the news was concerned with one subject -- "Sigma 7".

To John C. "Jack" Stonesifer from Hanover, Pennsylvania, it was a moment he will never forget. He scanned the infinite expanse above, and all at once he spotted it.

Astronaut "Wally" Schirra's spacecraft was returning to earth with its parachute deployed after six orbits and nine hours and 13 minutes in space. Stonesifer watched it glide down and splash into the water less than five miles away.

Helicopters lowered the pararescue team and the team of trained Navy swimmers attached a flotation collar to the spacecraft to stabilize it in the water. Sigma 7 was pulled to the carrier Kearsarge and hoisted aboard.

- more -

Add 1
MSC 63-109

Safely resting on the deck of the ship, Schirra, still inside the spacecraft, "blew the hatch." Stonesifer helped assist him climb out.

Everything had gone according to plan and John Stonesifer had helped plan it. That's his job. He works in the recovery operations sections of NASA's Manned Spacecraft Center in Houston.

He joined the NASA Manned Spacecraft Center at Langley Research Center in Virginia in January, 1962.

"Before I got into the recovery operation business," he recalls, "I thought it was a pretty straightforward task. But I soon found that you don't just land a man in the ocean and send a ship out to pick him up."

No, it is much more complicated than that. For example, in the Schirra recovery 26 ships, 143 aircraft and helicopters, and 17,000 personnel were assigned in direct operational support. In addition, there were stand-by and alert forces around the world, ready to swing into action in the event of a contingency landing anywhere along the orbital path.

Stonesifer in the recovery operations section helps prepare a detailed recovery plan for each mission. The optimum landings areas are determined, based on the mission flight plan, the tracking network capability, the availability of Department of Defense units for support and weather conditions.

"After this, we prepare a recovery requirements document that is submitted to the Department of Defense," the 35 year old recovery engineer said.

This document states the plans as formulated by NASA for the types of support needed -- "the number of ships and aircraft and where we would like them to be."

It also outlines the medical facilities and personnel required and plans for the transportation involved to transfer people and equipment.

Another document gives the details of the various procedures to be followed during recovery. A post-retrieval handbook tells "what to do with the spacecraft after it has been recovered to secure the systems, preserve any experiments, and how to pack it and get it back to the Cape."

As if the above activities aren't enough to keep him busy, Stonesifer added, "We are also responsible for training the recovery forces in using special techniques and equipment." This even includes conducting egress training at Cape Canaveral for the astronauts.

The training task is complicated by the fact that no two missions are exactly the same and the recovery personnel is usually different. As a result, in each Mercury operation men had to be trained and re-trained in new procedures.

Stonesifer has served in several capacities in the Mercury series.

"On Scott Carpenter's flight I was the recovery engineer aboard the USS Intrepid which recovered him," he said. "Later on that day, I was transferred to the USS Pierce, which picked up the spacecraft to perform the post-retrieval procedures on it."

Add 3
MSC 63-109

He had the same duties on the Kearsarge for Schirra's flight, but on John Glenn's he assisted the Recovery Coordinator. The coordinator relays information about the flight to the DOD units from the Mission Control Center at Cape Canaveral.

In the recent Cooper flight Stonesifer was the recovery team leader aboard the USS Wasp. It was in position for a spacecraft landing in the Bermuda recovery area.

John Stonesifer fondly remembers growing up in the Pennsylvania hills that are such a contrast to the Houston plains area. He graduated from Hanover's Eichelberger High School in 1947 and attended Gettysburg College in Gettysburg, Pennsylvania for three years.

After graduating from the University of Miami with a physics degree, he started at Langley as an aeronautical research engineer in 1957 and transferred to MSC just before it moved to its new home in Houston.

His wife, the former Marguerite Vigneron of Buffalo, New York, and two children, Kurt, age 6, and Marlene, 4, came to Houston with him last year.

They have built a home in Friendswood, Texas, close to the permanent location of the Manned Spacecraft Center which is now under construction.

Temporarily, MSC is housed in leased facilities nearby in Houston. The \$120 million complex is scheduled for completion in 1964.

- End -

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT CENTER  Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-110
July 5, 1963

HOUSTON, TEXAS -- Tests to give the astronaut maximum confidence in his space suit while he whirls around the earth for as long as 14 days, are being conducted for the Manned Spacecraft Center by the B. F. Goodrich Company.

Through extensive tests, the program is designed to achieve 99.9 percent reliability in Gemini space suits and a high level of confidence on the part of the wearers.

Four Gemini space suits, manufactured by the David Clark Co., Inc., of Worcester, Massachusetts, will be delivered to B. F. Goodrich in August to begin tests based on the "life expectancy" of moving parts on the Gemini suit, projected over a "lifetime" of 10 missions of 14 days each. The mission schedules for the reliability program were devised by the Crew Systems Division of MSC to give the suits a maximum workout.

- more -

Add 1
MSC 63-110

Reliability of working parts of the suit will include opening and closing the pressure sealing zippers, required during rest periods and for comfort; opening and closing the visor on the headpiece; removing and replacing gloves and headpiece, required during rest periods; connecting and disconnecting inlet and outlet fittings on the Environmental Control System (ECS), required during systems checks on the pad; running the suits through leakage tests, and testing them at maximum safety pressures.

In establishing proposed mission schedules for the suits, the Crew Systems Division estimated that the pressure sealing zipper, for example, would be actuated 710 times (71 times during 14 days x 10 missions). To provide for repairs in-between missions, extra pressure sealing zippers will be tested.

Our pressure sealing zippers will be actuated to failure to determine a zipper "life" criterion.

The Gemini space suit reliability program will be monitored by MSC's Crew Systems Division. Cost of the program is \$34,355.00.

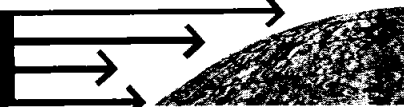
Project Gemini, two-man spacecraft flights to begin in late 1964, is designed to develop pilot techniques in docking and rendezvousing in space. They will also be used to study the effects of long duration flights -- 14 days in space -- on men in a weightless environment. Gemini flights will lead to this nation's most ambitious flight -- the Project Apollo manned lunar landing, scheduled some time before 1970.

###

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANAGED SPACECRAFT
CENTER



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-111
July 3 1963

Gemini Ejection Seat Tested on Rocket Sled

HOUSTON, TEXAS -- The ejection seat escape system for the NASA Gemini two-man spacecraft has successfully undergone its first high speed rocket sled test. Both of the dummy astronauts were safely recovered after ejection at nearly 600 miles per hour from a "boilerplate" spacecraft traveling down the high speed test tract at the Naval Ordnance Test Station, China Lake, California.

A series of tests are also being conducted to simulate ejection before launch. These tests consist of firing the ejection seats from a 150 foot tower, and obtaining parachute recovery of the dummy astronauts.

Unlike the escape system of the Mercury spacecraft in which the entire spacecraft is rocketed off in case of launch vehicle malfunction, the Gemini escape system provides for safe seat ejection of the astronauts on the launching pad in case of launch vehicle failure. The system will also provide safe escape during a portion of powered flight, and after re-entry. The rocket sled tests simulate an emergency ejection during the boost phase of the Gemini flight.

Add 1
MSC 63-111

The escape system is being developed by Weber Aircraft Corporation, Burbank, California under a subcontract from McDonnell Aircraft Corporation, prime contractor for the Gemini spacecraft. The entire program is under the direction of the NASA Manned Spacecraft Center, Houston, Texas.

Max Peterson, Weber Project Manager for the Gemini escape system, stated that recent tests have been highly successful, and that development of the system was progressing rapidly, but that still further testing would be needed to attain perfection.

C. R. Sierra, Jr., Assistant Project Engineer in charge of Gemini recovery systems at McDonnell, and Kenneth F. Hecht, NASA Manned Spacecraft center official in charge of Gemini recovery systems, expressed satisfaction with the results of the recent Gemini ejection seat tests.

###

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT
CENTER

NASA



Houston
1, Texas

WAlnut 8-2811
Extension 3751

MSC 63-112
July 6, 1963

HOUSTON, TEXAS -- Three government photographers who have followed the progress of the manned spaceflight program since its infancy will reveal some of their "tricks of the trade" in Dallas July 22.

John Brinkmann, Gene Edmonds, and John Holland of Manned Spacecraft Center's Photographic Division will present a 90 minute report on photography in the space age at the 72nd International Exposition of Professional Photography at the Dallas Coliseum.

The three career photographers have been covering space launchings since 1959 when primates Sam and Miss Sam marked the preparations for the first manned spaceflights. They have been on hand for launch and recovery activities of the U. S. astronauts, from Shepard to Cooper.

In addition, they have built up a complete photographic laboratory for processing the thousands of feet of engineering film footage of spacecraft tests, and the still photographs which chronicle the events of man in space.

dd 1
MSC 63-112

In conjunction with the appearance of the NASA photographers, a display of earth sky pictures taken by the astronauts, and the actual hardware used to take the pictures will be on display in a special NASA exhibit.

John R. Brinkmann, Head of the Photographic Division, has been in engineering photography since 1945. Starting with the National Advisory Committee for Aeronautics at the Langley Research Center, he has literally worked his way to the top position in his field.

Gene Edmonds directs general photographic activities for the Manned Spacecraft Center. He has directed photographic operations on launch and recovery of all Mercury operations, and records test events that prepare for the launches tomorrow.

John Holland coordinates the activities of the photographic laboratory at MSC. He is responsible for processing and preparing negatives and film footage of all material photographed by MSC cameramen. He worked with missile research photography with the Navy before joining the NASA organization in 1962.

###

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT
CENTER

NASA



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-113
July 14, 1963

HOUSTON, TEXAS -- When the solar eclipse of July 20 casts the shadow of the moon across the Northeastern United States and Central Canada, it will be - from a scientific standpoint -- the most thorough observation of such phenomena in history.

The National Aeronautics and Space Administration will utilize jet aircraft, rockets and earth telescopes to observe the eclipse, while more than 100 other astronomers conduct experiments of their own.

Astronaut M. Scott Carpenter, accompanied by NASA Manned Space Sciences Astronomer, Dr. Jocelyn R. Gill, will witness the eclipse from a specially equipped DC-8 jet, flying above most of the restrictions of atmospheric haze at 42,000 feet.

During the flight -- a joint Douglas Aircraft Company and National Geographic Society project with 11 other organizations participating - Dr. Gill will point out to Carpenter various scientific details which astronauts may encounter in future space flights.

Add 1
MSC 63-113

In addition, the astronaut will attempt to photograph the airglow caused by zodiacal light. He will use a camera specially prepared for the eclipse by Dr. Edward P. Ney, Professor of Physics at the University of Minnesota.

Sheldon Smith and Ray Torrey of NASA's Ames Research Center will also be aboard the DC-8 to photograph rays of the sun's corona extending to approximately six solar radii (six times the radius of the sun). Previous experiments of this type have been able to reach to a distance of only about two and a half radii, and particular detail will be sought in the sun's polar regions to trace the solar magnetic fields. **Results** from the experiments may lead to improved solar flare prediction.

In addition to providing a nearly unobstructed view of the eclipse, the flying observation platform, following the shadow on the moon at 520 MPH, will increase the viewing time to 144 seconds. As the eclipse's shadow covers the earth, moving at 1700 MPH, normal ground viewing time is only 100 seconds.

Ground observations will be conducted from Pleasant Pond, Maryland, five miles northeast of Caratunk, and within the area of eclipse totality, by representatives of the Goddard Space Flight Center. 1300 feet above sea level, scientists will have about 62 seconds in which to conduct their photographic experiments. One of the goals of the Goddard team is to photograph faint comets, visible only from the ground, when they pass near enough to the sun to be illuminated by coronal rays.

Add 2
MSC 63-113

Further NASA experiments involve rocket launchings from Fort Churchill, Canada; White Sands, N.M.; and Wallops Island, Va. Six Nike Apache rockets have been instrumented to measure electron density, electron temperature, and solar radiation in the ultraviolet and X-ray regions of the spectrum as the sun's disk is initially obscured and then cleared. The rockets will be launched for NASA by the USAF from Fort Churchill over a two-hour and 12 minute period.

At Fort Churchill NASA will also fire two Aerobee rockets equipped with spectrophotometric instruments, one on July 20 and one on July 22, to measure certain features in the far ultraviolet region of the night airglow during and after the eclipse.

The Wallops Island Aerobee rocket will measure electron and neutron particle temperatures at high altitudes while the prime objective of the White Sands Aerobee experiment is to collect data on solar activities during the July 20 eclipse.

It is hoped that these experiments will greatly contribute to the field of astrophysics and will increase man's understanding of the sun, particularly in the areas of flare prediction and plasma activities between the sun and the earth.

###

JULY 12, 1963

Geri

CONTRACT SIGNED WITH IBM FOR COMPUTER EQUIPMENT.

National Aeronautics and Space Administration, Manned Spacecraft Center, Houston, Texas has signed a contract for \$36,200,018 with IBM Corporation to implement the computing and data processing equipment of future manned space flight.

The real-time computer complex will be located on the ground floor of the Mission Control Center at Manned Spacecraft Center's future home at Clear Lake, Texas. It is from this Center that MSC will control and monitor all future missions in the manned space flight program beginning with Gemini's first rendezvous flight.

Four IBM 7094 computers, and related computer equipment will monitor and analyze data from Gemini mission, the first attempt to rendezvous in space, and future Apollo flights. Project Apollo's ultimate goal is to land two U.S. astronauts on the moon.

IBM's responsibility under the contract includes the design of the computing center, mission and mathematical analysis, programming, equipment engineering, computer and performance testing, maintenance and operations, and documentation for the real-time computer complex.

IBM will also be responsible for the launch trajectory data system and for the transmitting and processing of guidance data between Cape Canaveral and the Bermuda tracking station, instrumentation ship, and the Mission Control Center. Two 7094 computers are now installed in IBM interim facility in Houston. A third computer will be delivered by IBM in September. When the Mission Control Center at Clear Lake is completed, the facility will be moved to its permanent location. The fourth computer to be delivered after the move will complete the real-time computer complex.

The MSC plans to occupy its future home at Clear Lake by March 1964.

NASA announced selection of IBM to provide the computer complex on October 16, 1962 after evaluating proposals submitted by eleven companies

(see NASA release 62-221).

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANAGED SPACECRAFT CENTER
HOUSTON, TEXAS



Walnut 8-2811
Extension 3751

MSC 63-113
July 14, 1963

Don
7/11/63

HOUSTON, TEXAS -- When the solar eclipse of July 20 casts the shadow of the moon across the Northeastern United States and Central Canada, it will be - from a scientific standpoint -- the most thorough observation of such phenomena in history.

The National Aeronautics and Space Administration will utilize jet aircraft, rockets and earth telescopes to observe the eclipse, while more than 100 other astronomers conduct experiments of their own.

Astronaut M. Scott Carpenter, accompanied by NASA Manned Space Sciences Astronomer, Dr. Jocelyn R. Gill, will witness the eclipse from a specially equipped DC-8 jet, flying above most of the restrictions of atmospheric haze at 42,000 feet.

During the flight -- a joint Douglas Aircraft Company and National Geographic Society project with 11 other organizations participating - Dr. Gill will point out to Carpenter various scientific details which astronauts may encounter in future space flights.

Add 1
MSC 63-113

In addition, the astronaut will attempt to photograph the airglow caused by zodiacal light. He will use a camera specially prepared for the eclipse by Dr. Edward P. Ney, Professor of Physics at the University of Minnesota.

Sheldon Smith and Ray Torrey of NASA's Ames Research Center will also be aboard the DC-8 to photograph rays of the sun's corona extending to approximately six solar radii (six times the radius of the sun). Previous experiments of this type have been able to reach to a distance of only about two and a half radii, and particular detail will be sought in the sun's polar regions to trace the solar magnetic fields. Results from the experiments may lead to improved solar flare prediction.

In addition to providing a nearly unobstructed view of the eclipse, the flying observation platform, following the shadow on the moon at 520 MPH, will increase the viewing time to 144 seconds. As the eclipse's shadow covers the earth, moving at 1700 MPH, normal ground viewing time is only 100 seconds.

Ground observations will be conducted from Pleasant Pond, Maryland, five miles northeast of Caratunk, and within the area of eclipse totality, by representatives of the Goddard Space Flight Center. 1300 feet above sea level, scientists will have about 62 seconds in which to conduct their photographic experiments. One of the goals of the Goddard team is to photograph faint comets, visible only from the ground, when they pass near enough to the sun to be illuminated by coronal rays.

Further NASA experiments involve rocket launchings from Fort Churchill, Canada; White Sands, N.M.; and Wallops Island, Va. Six Nike Apache rockets have been instrumented to measure electron density, electron temperature, and solar radiation in the ultraviolet and X-ray regions of the spectrum as the sun's disk is initially obscured and then cleared. The rockets will be launched for NASA by the USAF from Fort Churchill over a two-hour and 12 minute period.

At Fort Churchill NASA will also fire two Aerobee rockets equipped with spectrophotometric instruments, one on July 20 and one on July 22, to measure certain features in the far ultraviolet region of the night airglow during and after the eclipse.


The Wallops Island Aerobee rocket will measure electron and neutron particle temperatures at high altitudes while the prime objective of the White Sands Aerobee experiment is to collect data on solar activities during the July 20 eclipse.

It is hoped that these experiments will greatly contribute to the field of astrophysics and will increase man's understanding of the sun, particularly in the areas of flare prediction and plasma activities between the sun and the earth.

###

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT CENTER  Houston
1, Texas

WAlnut 8-2811
Extension 3751

MSC 63-114
July 13, 1963

HOUSTON, TEXAS -- More than 3,000 representatives from the aerospace industries are expected to attend the Second Industry Assistance Symposium here July 30.

The symposium is sponsored by the NASA Manned Spacecraft Center and the Houston Chamber of Commerce and will be held at Rice University.

MSC will conduct morning and afternoon panel discussions on procurement methods, display space-age hardware and hold question and answer sessions on these items.

Dave W. Lang, Jr., Chief of the Procurement and Contracts Division, will be the principal speaker. His talk is entitled a "Study of MSC's Economic Impact."

The panel discussion will cover procurement methods in the following areas:

Research and Development

Construction, Modification, Test Facility and Services Support

Product and Equipment Reviews

- more -

Add 1
MSC 63-114

In addition, there will be a discussion on subcontracting procedures by representatives of the three prime contractors doing business in manned spaceflight with the National Aeronautics and Space Administration. These companies are North American Aviation, Inc., McDonnell Aircraft Corporation and Grumman Aircraft Engineering Corporation.

The MSC, two other government agencies and ten private businesses will have exhibits on display.


Registration will begin at 8 A. M. (CST) in the Rice Memorial Center lobby. There will be a welcoming remarks by Dr. Kenneth Pitzer, Rice University President, and Wesley J. Hjernevik, MSC's Assistant Director for Administration.

A barbecue will be held at noon in the Rice stadium. Admission is by \$2.50 ticket only and must be purchased in advance from the Chamber of Commerce.

dg

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT CENTER   Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-115
July 16, 1963

HOUSTON, TEXAS -- The first launch vehicle specifically produced for Apollo program spacecraft testing is en route to the White Sands Missile Range in New Mexico where its initial test flight is scheduled next month.

The primary purpose of next month's test will be to check out the Little Joe II launch vehicle. The Apollo project is this country's manned lunar exploration program.

The 30-foot long, Little Joe II launch vehicle, loaded on an extendable, low-bed trailer, left the General Dynamics/Convair plant yesterday - June 15. Three other trucks are transporting accessories and the dummy Apollo payload, which includes an adapter section, Apollo spacecraft and launch escape system.

Little Joe II is a solid-fuel launch vehicle produced by Convair for the National Aeronautics and Space Administration. The contract is managed by NASA's Manned Spacecraft Center, Houston, Texas.

Add 1
MSC 63-115

Little Joe II has been designed specifically for unmanned-suborbital testing of the Apollo spacecraft. It is a relatively inexpensive launch vehicle, incorporating many proven, off-the-shelf systems and components.

The propulsion system, for example, can be tailored to meet specific mission requirements. The vehicle can accommodate as many as seven Aerojet-General algal 1-D solid-fuel motors, producing 720,000 pounds of thrust. Or it can be adapted to use combinations of algal and other off-the-shelf, solid-fuel motors to suit test mission requirements, enabling it to achieve a variety of altitudes and velocities.

Simplicity and reliability have been designed into the Little Joe II airframe which consists of a cylindrical body about 13 feet in diameter and four fins. The airframe is produced in two sections - a forebody about 19 feet long and an afterbody about 10 feet long. The four fins, each about 50 square feet, are spaced around the afterbody.

The 100,000 pound launcher, which will aim the Little Joe II launch vehicle in azimuth and elevation, has already been installed at White Sands.

The vehicle is scheduled to arrive at White Sands June 17 where vehicle and system test and checkout will take place. When ready for launch, the vehicle and payload will tower nine stories high.

Purpose of this flight will be to qualify the Little Joe II launch vehicle for later flights with the "boilerplate" Apollo payload and Apollo spacecraft built to production standards. The Little Joe II tests will provide engineering information for use on manned Apollo orbital flights.

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT
CENTER

NASA

Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-116
July 16, 1963

HOUSTON, TEXAS -- A young research chemist with 15 years experience in developing life-sustaining systems from submarines through spacecraft has been named Chief of the Manned Spacecraft Center's Crew Systems Division.

Richard S. Johnston, 36, formerly Deputy Chief of the Division, was named to his new position by Dr. Robert R. Gilruth, Director of MSC. The top Division chair was vacated on July 2 by Dr. Stanley C. White, an Air Force officer in the Medical Corps, who was reassigned to Brooks Air Force Base, Texas.

With Crew Systems Division since it was organized in April, 1961, Johnston first became associated with Project Mercury and its originating Space Task Group in 1959. He supervised the design, layout and acquisition of equipment for the astronaut transfer van used at Cape Canaveral to transport the space suit-clad astronaut from Hangar "S" to the launch pad. In a working paper he presented in November, 1960, Johnston detailed a medical operations plan which has been used throughout the Project Mercury space flights.

- more -

Add 1
MSC 63-116

During his early work with MSC, he contributed to the development of spacecraft life-supporting systems, including pressure suit and restraint systems.

Johnston was born in Keyser, West Virginia on October 1, 1926. He was graduated from McKinley Technical School in Washington, D. C. In 1951, he received a BS degree in chemistry from the University of Maryland.

From 1946 to 1955, he worked as a research chemist with the Naval Research Laboratory in Washington, D. C., where he assisted in the development of chemicals which produced oxygen for breathing apparatus. He also worked in the evaluation and development of submarine air purification systems.

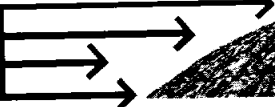
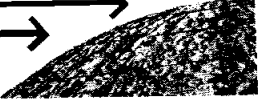
Johnston transferred to the Bureau of Aeronautics, Navy Department, in 1955 and was placed in charge of developing aircraft liquid oxygen equipment. For his work during this period, the Department of the Navy presented him an "outstanding performance" certificate of commendation. During his three years with the Bureau, he also worked on the application of the low-level ejection seat escape system to Navy aircraft.

Johnston has authored and co-authored more than 20 technical publications, and has made nine technical presentations on his work.

With his wife, the former Jean Armbruster, and two children, Johnston lives in Timber Cove, Seabrook, Texas.

NEWS RELEASE -

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT CENTER    **Houston**
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-117
July 16, 1963

HOUSTON, TEXAS -- Cameras which have documented America's achievements in manned space flight will be among the items to be displayed at the 72nd International Exposition of Professional Photography at the Dallas Memorial Auditorium, July 22-24, 1963.

In addition, Mercury Spacecraft "Aurora 7" which was flown by Astronaut Malcolm Scott Carpenter on May 20, 1962, will be on public display. This is the first Dallas showing of a Mercury spacecraft which was piloted by an American astronaut.

Among the cameras to be on display at the Photography Exposition are: the 16mm Milliken pilot observer camera used during the flight of Astronaut Walter M. Schirra on October 2, 1962; 16mm Millikens used as periscope and instrument observer cameras, and the 70mm earth sky camera carried aboard the unmanned Mercury flight of September 13, 1961. A 70 mm Hasselbad and a special robot 35 mm royal camera, identical to the one carried by Astronaut Gordon Cooper to photograph the dim light phenomena are included in the Center's display.

Add 1
MSC 63-117

The Carpenter spacecraft, cameras and other space exhibits will be in the NASA display area in the corridors outside the main theater of the auditorium.

The exhibits are part of the Manned Spacecraft Center's program at the International Exposition. Three of the Center's top photographers are scheduled to give a 90-minute presentation "Photography in Space" for the Professional Photographers Monday, July 22, at 9:00 p. m. Taking part in the five part space photography presentation are: Eugene Edmonds, Chief of General Photography Branch; John Holland, Chief, Photographic Laboratory; Thomas Brahm, Technical Assistant to Assistant of the Photographic Division of the Manned Spacecraft Center.

Holland will speak on the development of spacecraft and high speed photography and how an engineering photographic laboratory takes shape in the space age.

Edmonds, who has served as prime NASA photographer on all Project Mercury flights, will talk on photographic aspects during recovery operations and on modern experimental photography.

Brahm's presentation will deal with tomorrow's photography in space. He is substituting for John Brinkman, Chief of Photographic Division.

The NASA exhibit is the most complete concentration of items related to manned space flight ever placed on public display in Dallas. The NASA exhibit will focus emphasis on the next steps in American's manned space flight program.

Models of the spacecrafts which will carry this nation's astronauts in Project Gemini and Project Apollo will be on view.

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT
CENTER

NASA



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-118
July 16, 1963

HOUSTON, TEXAS - Maj. Gen. O. K. Neiss, U.S. Air Force Surgeon-General, visited Manned Spacecraft Center Monday to award the Legion of Merit to a retired Air Force doctor who is now Acting Director of Space Medicine for the National Aeronautics and Space Administration.

General Neiss presented the Legion of Merit to Dr. George M. Nauf, who recently became NASA's Acting Director of Space Medicine in place of Dr. C. H. Roadman.

General Neiss also visited briefly with Dr. Robert R. Gilruth, Director of MSC, was briefed on space medical operations and research at MSC and toured the Crew Systems Division facilities.

Presentation of the Legion of Merit to Dr. Nauf took place in Dr. Gilruth's office shortly after noon, Monday. The citation accompanying the medal covered Dr. Nauf's contributions to aerospace medicine during the period of January 1, 1962 to October 31, 1962.

Dr. Nauf became Deputy Director of Space Medicine for NASA in January, 1962, on assignment from the Air Force. Following his retirement from the Air Force on October 31, 1962, after 22 years of service, Dr. Nauf continued in his NASA role until he became Acting Director of Space Medicine June 1.

MSC 62-118
July 16, 1963

The award presentation was made during a visit of Dr. Nauf to MSC. He and General Neiss were briefed on MSC medical and crew systems development activities by Dr. Charles A. Berry, MSC Medical Operations Officer, and Richard S. Johnston, Chief of the Crew Systems Division.

General Neiss returned to San Antonio Monday afternoon.

###

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT CENTER  **Houston 1, Texas**

WALDEN 8-2811
Extension 3751

MSC 63-119
July 22, 1963

HOUSTON, TEXAS -- A non-conventional life raft designed for Mercury astronauts with ballasts to stabilize it in rough seas won a \$1,000 incentive award for its two Manned Spacecraft Center inventors.

Matthew I. Radnofsky and Glenn A. Shewmake of MSC's Crew Systems Division accepted the award from Dr. Robert R. Gilruth. A brief ceremony commending their work was held recently in the MSC Director's office. The award was made by the Inventions and Contributions Board of the National Aeronautics and Space Administration.

The lightweight life raft, packed with five pounds of water, takes up 12 x 8 x 3 inches in the spacecraft. It has been included in the Mercury survival kit of every manned orbit flight beginning with "Friendship 7", flown by Col. John H. Glenn, Jr. The raft holds one man.

The Radnofsky-Shewmake design was used for the first time under emergency conditions by Cmdr. M. Scott Carpenter. Having overshot his landing by approximately 200 miles, Carpenter climbed out of his spacecraft, inflated the life raft and waited alongside "Aurora 7" for assistance.

Add 1
MSC 63-119

The life raft design is under consideration for use by Gemini and Apollo astronauts. The two-man Project Gemini flights, beginning in late 1964, will develop piloting techniques in docking and rendezvousing in space, and will study the effects of long duration flights -- up to two weeks -- on man. Project Apollo flights will ultimately land two U. S. astronauts on the Moon by 1970.

The Department of Defense and commercial airlines with overseas flights are also interested in the life raft design.

###

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
MANNED SPACECRAFT CENTER **NASA** **Houston**
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-120
July 24, 1963

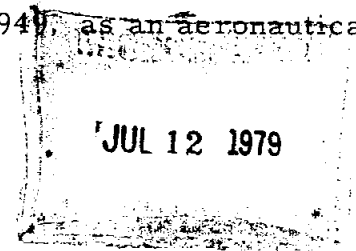
HOUSTON, TEXAS -- William E. Stoney, Jr., 37, formerly chief of advanced vehicle conceptual studies in the office of Advanced Research and Technology at National Aeronautics and Space Administration headquarters in Washington, has been named Chief of the Spacecraft Technology Division of Manned Spacecraft Center's Office of Engineering and Development.

Stoney succeeds Charles Mathews, who has been named Acting Manager of the Gemini Spacecraft Project Office. Mathews moved to the Gemini Project position last Spring.

Born in Terre Haute, Indiana, September 13, 1925, Stoney attended Polytechnic Preparatory School in Brooklyn, New York, and received a Bachelor of Science degree from Massachusetts Institute of Technology in aeronautical engineering in June, 1949. He received a Master's Degree from the University of Virginia in 1951.

Stoney joined the staff of NASA Langley Research Center (then part of the National Advisory Committee for Aeronautics) August 24, 1949, as an aeronautical

- more -



Add 1
MSC 63-120

engineer in the former Pilotless Aircraft Research Division, now called the Applied Materials and Physics Division. He was appointed head of the Heat Transfer Section in 1958 and was assigned to head Langley's Scout Project Group on February 29, 1960.

He was awarded a Sloan Fellowship in executive development at MIT in 1961 and spent the next year there studying in depth the fundamentals of management action. At the end of the year, he was appointed to the position at NASA headquarters.

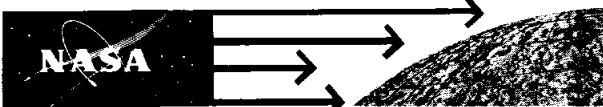
A World War II veteran, Stoney served with the Air Force from March, 1943, to March 1946.

###

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT
CENTER



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-121
July 25, 1963

HOUSTON, TEXAS -- Dave W. Lang, Jr., of the NASA Manned Spacecraft Center Procurement and Contracts Division, will be the principal speaker July 30 at the Second Industry Assistance Symposium at Rice University.

Lang's speech, entitled "Purchase Request for the Moon," is a review of how space funds are being spent in the national effort to reach earth's nearest neighbor.

In addition to the talk, there will be morning and afternoon panel discussions on procurement methods and displays of space-age hardware.

The discussions will cover procurement in the following areas: products and equipment, construction and services support, research and development and subcontracting procedures.

Registration will begin at 8 A. M. in the Rice Memorial Center lobby. The public is invited.

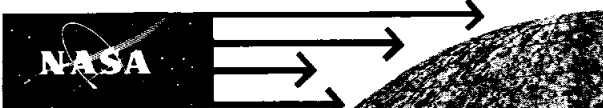
The symposium is sponsored by the Houston Chamber of Commerce and MSC.

dg

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT
CENTER



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-122
July 29, 1963

HOUSTON, TEXAS -- Robert T. Rodriguez, 25, employed as a clerk in the Manned Spacecraft Center, Financial Management Office, is being held by U. S. Secret Service officials, for a hearing before the U. S. Commissioner concerning a shortage of \$461 of federal funds.

Rodriguez, who was employed at MSC in February of 1963, formerly was a Civil Service employee with the Immigration and Naturalization services in Houston.

As a clerk in the MSC Financial Management Office, Rodriguez was an authorized imprest fund cashier, dispersing Treasury Department money to MSC procurement personnel for needed cash purchases. There are two such funds at the Center.

The shortage was discovered in a routine check of his account while Rodriguez was on sick leave.

MSC Security officials and auditors were called in to verify the apparent shortage of \$461. As a result, Rodriguez was also questioned by the U. S. Secret Service. The fund shortage is entirely covered by back salary and other funds paid to Rodriguez, MSC officials said.

Add 1
MSC 63-122

Rodriguez is single and resides at 2331 Bolsover Road, Houston, Texas.
He is being suspended from his position at MSC pending completion of the
investigation.

###

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT
CENTER

NASA



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-123
August 1, 1963

HOUSTON, TEXAS -- Dr. Charles A. Berry, Chief of the Manned Spacecraft Center Medical Operations Office, has resigned his commission as Lieutenant Colonel in the U. S. Air Force to accept Civil Service appointment to the MSC position.

Dr. Berry has been on loan to the National Aeronautics and Space Administration for assignment to organize the MSC Medical Operations Office since July 1, 1962. One of the Medical Operations functions is that of flight surgeon to the astronauts, formerly performed by Dr. William Douglas, also an Air Force Lieutenant Colonel, who had been reassigned to Air Force duty.

MSC Director Robert R. Gilruth said establishment of the Medical Operations Office chief's position as a Civil Service post is felt to be necessary to assure continuity of personnel in the position.

The Medical Operations Office has the responsibility for all medical, health and safety aspects of the Center's operations, including flight missions.

Add 1
MSC 63-123

As the incumbent chief of the office, Dr. Berry was offered the post under Civil Service and accepted the appointment, resigning his commission for this purpose.

A veteran of 15 years of military service, including three years during World War II, Dr. Berry was rated as a Senior Flight Surgeon with the Air Force and was qualified as a "Space Surgeon" in 1960.

Dr. Berry obtained a Bachelor of Arts degree in 1945 from the University of California at Berkeley, and was awarded a Doctor of Medicine degree from the University of California Medical School in San Francisco in 1947. After serving a rotating internship with the University of California Service at the San Francisco City and County Hospital, he entered private practice in Indio and Coachella, California, for three years.

Dr. Berry entered the United States Air Force in July 1951, serving first at Hamilton AFB, California, and then entering the Aviation Medicine residency training program in September 1951. Between 1952 and 1955, he served as Base Flight Surgeon and Deputy Command Surgeon in the Caribbean Air Command, Albrook Air Force Base, Canal Zone.

In 1955, Dr. Berry completed the final year of his residency training program at the Harvard School of Public Health; he received his Master of Public Health, Cum Laude.

Add 2
MSC 63-123

In July 1956, Dr. Berry was assigned as Assistant Chief of the Department of Aviation Medicine at the School of Aviation Medicine at Randolph Air Force Base, Texas and in July 1958 became Chief of the Department of Flight Medicine. He served on temporary duty in Hollywood, California as technical advisor for "Men Into Space" during the Summer of 1959. In September of that year, he reported for duty in the Aerospace Medicine Division, Office of the Surgeon General, USAF. In December -- same year -- he was selected as an Aeromedical Monitor for the Manned Spacecraft Center's Project Mercury operations. Since that time, he has served as prime monitor at the Canary Island and Bermuda sites and has trained other medical monitors at these sites.

Dr. Berry is a member of the American Medical Association, the American Academy of General Practice, the AIAA and the Association of Military Surgeons. He is on the Aerospace Medicine Committee of the American Medical Association. He is a Fellow of the Aerospace Medical Association, a member of the Space Medicine Branch of that Association, and a member of the Committee on Aviation Health and Safety. He is a Fellow of the American College of Preventive Medicine. He is a member of Delta Omega (Honorary Public Health Society) and Nu Sigma Nu, and is an Associate Fellow of the American College of Physicians. He is a member and is on the Board of Governors of the Society of USAF Flight Surgeons.

Dr. Berry's community activities have included chairmanship of a Boy Scout Troop Committee, Trustee of the School Board and a member of the Board of the First Methodist Church, Seabrook, Texas.

Add 3
MSC 63-123

He is rated as a Senior Flight Surgeon and has been awarded the American Campaign Medal, World War II Victory Medal, National Defense Service Medal, Navy Good Conduct Ribbon, the Commendation Ribbon and Wings of the Nicaraguan Air Force.

On April 26, 1961, he was presented the Arnold D. Tuttle Award for his articles on original research published in Aerospace Medicine in 1959 and 1960.

On February 9, 1962, he was awarded the USAF Certificate of Achievement in recognition of outstanding qualifications in the speciality of Aviation Medicine. Dr. Berry has been author or co-author of nearly 30 aerospace medical papers and several chapters of book length works.

A native of Rogers, Arkansas, Dr. Berry spent most of his life prior to entering military service in the Coachella Valley, Indio, California. He now resides in El Lago, Seabrook, Texas with his wife Addella (Dell) and their three children Mike (17), Charlene (14) and Janice (12).

###

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
MANNED SPACECRAFT CENTER  Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-124
August 7, 1963

HOUSTON, TEXAS -- "A Review of Knowledge Acquired From the First Manned Satellite Program," is the subject of a talk to be given August 16 by Christopher C. Kraft, Jr., of the NASA Manned Spacecraft Center Flight Operations Division.

The talk is one of more than a dozen given by key scientists and engineers during the Conference on Artificial Satellites at Virginia Polytechnic Institute, Blacksburg, Virginia. The meeting will be held August 12 through 16.

The conference has a two-fold purpose: to assist in the interchange of information among scientists and engineers working actively in space research and to bring vital information to stimulate scientists and engineers who are not now engaged in space research.

Kraft's speech will outline some of the significant contributions Project Mercury has made to the area of space technology. He notes that the "real knowledge of Mercury lies in the change of the basic philosophy of the program."

- more -

Add 1
MSC 63-124

As one of the conference speakers, Kraft is returning to the university from whom he received formal education. He graduated from VPI in 1944 with a Bachelor of Science degree in aeronautical engineering.

Kraft joined the NASA science staff of the Langley Research Center's Flight Research Division in 1945. When the Space Task Group (forerunner of the Manned Spacecraft Center) was formed in October 1958, he became one of the original members.

As Chief of MSC's Flight Operations Division, Kraft has the responsibility of coordinating the thousands of details and personnel involved in preparing for manned space flight. These support activities include the recovery program, tracking network and flight control. When manned spaceflight is in progress, he assumes directorship from lift-off at Cape Canaveral until conclusion of mission.

At MSC, Kraft is presently engaged in operations planning for the Gemini and Apollo manned spaceflight programs. The programs are a continuation of the Project Mercury flight and are designed ultimately to place astronauts on the moon and safely return them to earth.

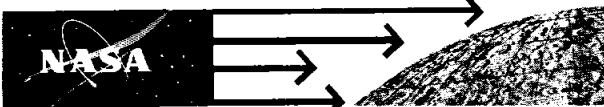
He is a native of Phoebus, Virginia.

dg

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT
CENTER



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-125
August 8, 1963

HOUSTON, TEXAS -- The first water drop test to qualify the parachute recovery system which will lower the two-man Gemini spacecraft to a water landing was completed successfully at Salton Sea, California, NASA Manned Spacecraft Center announced today.

The drop was made over the San Felipe drop zone from 20,000 feet and follows a series of five successful land drops just completed at El Centro, California during the past three months.

The parachute recovery system, designed by Northrops Ventura Division will be Gemini's prime recovery system until the paraglider system is developed. The paraglider, designed for dry-landings, can be guided by the astronaut to a controlled landing at a pre-selected point. The parachute system is designed for wet-landings and will be used for unmanned and early manned Gemini flights. The first manned flight is scheduled for 1964. It will be preceded by two or three unmanned flights.

Project Gemini is designed to develop pilot techniques of docking and rendezvousing in space, and to extend space flight duration up to two weeks.

- more -

Add 1
MSC 63-125

Twenty qualification tests have been scheduled for completion in early 1964 which will check out the operation of the recovery system. This will include the parachutes, the pyrotechnic devices which explosively trigger the deployment and release of the parachutes and the timing system -- technically called "sequencing", which triggers the various events at the proper time. The tests call for use of a Gemini boilerplate, a dynamic duplication of the Gemini spacecraft in configuration, weight, weight distribution (center of gravity) and "response" through its size and weight. Two additional tests using "static articles", a structural duplication of the Gemini spacecraft not only in size and weight, but in materials and construction, will finalize the testing of the recovery system.

The parachute recovery system consists of an 18-foot diameter ring-sail drogue and an 84-foot diameter ring-sail recovery parachute placed in a rendezvous-and-recovery section mounted on the small end of the spacecraft. The canister also houses the Gemini rendezvous radar equipment. Mercury experience has been used extensively in the design of the parachutes and necessary system components.

The tests over Salton Sea are made from a C-130 cargo-type aircraft. The boilerplate, mounted on a sled within the aircraft, is extracted from the rear of the cargo compartment by an extraction chute. After extraction, the boilerplate separates from the sled and "free falls" to around 12,000 feet where the stabilization parachute is separated and the Gemini recovery system is "armed".

Add 1
MSC 63-125

At 10,600 feet above water, the sequencing is initiated with the deployment of the drogue parachutes. After a two-second delay, the canister separates to ~~deploy~~ the main parachute. The parachute descends in "reefed" condition for eight seconds, when it "dis-reefs" (reefing, or restricting the skirt from opening until a safe descent speed is reached, prevents excessive loading on the canopy. Dis-reefing releases the restraining band, and allows the canopy to blossom). After 22 seconds, a single-point release is fired to free the bridle which allows the spacecraft to rotate on a two-point suspension system and assume a "nose-up" position 35 degrees from the horizontal. The 35-degree impact inclination lowers the spacecraft into the water on the "corner" of its heat shield, appreciably lessening the shock of landing impact. This method of water landing also eliminates the need for the impact bag which was used for Mercury spacecraft landings.

The parachute recovery system will be replaced later by a land landing system for which the paraglider is now under development. Throughout manned Gemini flights, ejection seats -- which can be triggered by each astronaut individually for a rapid escape from the spacecraft -- will serve as the emergency back-up recovery system.

###

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT CENTER  **Houston**
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-126
August 16, 1963

HOUSTON, TEXAS -- Christopher C. Kraft, Jr., Chief of the NASA Manned Spacecraft Center's Flight Operations Division, said in Blacksburg, Virginia today (August 16) that the real knowledge that came from Project Mercury was of a need for a change in the basic philosophy of the program.

Speaking before some 300 scientists and engineers during the Conference on Artificial Satellites at Virginia Polytechnic Institute, Kraft reviewed the scientific accomplishments of the Mercury program from its beginning until conclusion.

He noted that in the beginning the capabilities of man were not known and the systems had to be designed to function automatically. But with the addition of man to the loop, this philosophy changed 180 degrees since primary success of the mission depended upon man backing up automatic equipment that could fail.

MSC's Flight Operations Chief said that the basic aims of the program were accomplished in less than five years from the start of the program. "The first U. S. manned spaceflight program was designed to (1) put a man into earth orbit,

Add 1
MSC 63-126

(2) observe his reactions to the space environment and (3) bring him back to Earth safely at a point where he could be readily recovered. All of these objectives have been accomplished, and some have produced more information than we expected to receive."

The program demonstrated that man had a unique capability to reduce a mission that would not have been successfully completed with automatic equipment, Kraft said. "Man serves many purposes in the orbiting spacecraft. . . . he provides redundancy not obtainable by other means, he conducts scientific experiments and he can discover phenomenon not seen by automatic equipment."

According to Kraft, most important is "redundancy, the ability of a (man-rated) system to take over. . . . if the primary system fails." It might be called the safety valve feature of the spacecraft.

Kraft noted that the instance in Mercury flight in which the automatic system for reentry was used completely was at the end of Walter Schirra's six orbits. In all other flights, the astronaut took over and manually performed at least one part of the reentry.

The Mercury program also taught us about the "reliability requirement" and the need to check details carefully. It is a requirement that cannot be designed into a system on the drawing board. It consists of developing a contractor team that will take care to follow procedures and deliver a reliable product.

Add 2
MSC 63-126

"The smallest mistake in a man-rated system can bring totally unexpected results," Kraft told the scientific group. "The unexpected is the rule in the unknown, and if man is going to live in the region beyond our atmosphere, he is going to live under new rules or not at all. We have been aware of these rules but they have not been brought to our attention so vividly as they have in the manned flight program."

To the question: Can man adapt to an environment which violates most of the laws under which his body operates? Kraft said "yes. . . . for the period of one to two days." He listed the problems that were solved as: (1) the crushing acceleration of launch, (2) weightlessness, (3) the effects of weightlessness on the cardiovascular system, (4) disorientation and (5) environmental equipment to provide life support.

Another of the contributions was in the area of aeromedical equipment development. Blood pressure measuring systems were manufactured that would automatically take readings and transmit them by telemetry to the ground. These increased the accuracy of data coming back from the man in space. The inflight studies of the space pilot's reactions are probably the most complete medical records ever kept on an individual. Their value, Kraft said, has been to reaffirm that man can function normally in the space environment.

Kraft explained that Mercury also taught us not to stack the components on top of each other. It forces limited access. Failure of one component makes it necessary to pull out other functioning systems to replace the malfunctioning

Add 3
MSC 63-126

part. In the Gemini and Apollo spacecraft, Kraft said equipment will be modular and replaceable, allowing the substitution of alternate parts without tearing out whole subsystems.

The Flight Operations Chief concluded by stating: "The manned space flight program has added greatly to our knowledge of the universe around us and demonstrated that man has a proper role in exploring it. There are many unknowns that lie ahead in space, but we are reassured because we are confident in overcoming them by using man's capabilities to the fullest. . . . We now depend on man in the loop to back up the automatic systems rather than using automatic systems alone to insure that the mission is accomplished. . . . we have arrived at what we think is the proper mixture of that formula. Man is the deciding element; but we cannot ignore the usefulness of the automatic systems."

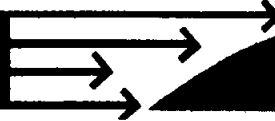
dg

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT
CENTER

NASA



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-127
August 18, 1963

HOUSTON, TEXAS -- He woke up, dressed, ate breakfast, and drove to work like any other man.

On the way he passed suburban commuters going to their desks for the day ahead. He has an office and a desk also, but his activity is not confined to it. In fact, his task is not even confined to this planet!

Mercury astronaut Virgil I. "Gus" Grissom parked his car at Ellington Air Force Base and climbed into the waiting T-33 jet fighter. He taxied down the runway and cleared for take-off.

In the air perhaps he thought of his combat missions in Korea or his "Liberty Bell 7" suborbital flight two years ago. Maybe he considered the future and the day when he might pilot the two-man Gemini spacecraft. Gemini will be able to stay in orbit for two weeks and rendezvous with another orbital vehicle.

At 9:54 his wheels touched the ground in St. Louis, Missouri. He guided his plane to the McDonnell Aircraft Corporation hangars and left it for re-fueling.

McDonnell, prime contractor for Gemini, is Grissom's second home. His astronaut assignment is to provide a liaison between Gemini and his colleagues.

An hour after landing Grissom had made two quick changes -- from flight suit to business suit to Gemini pressure suit. The suit provides protection from heating, loss of cabin pressure, and accelerations accompanying an emergency ejection. Without suit protection man has less than 12 seconds of useful consciousness in space.

A properly sized suit must allow complete freedom of action. To get a perfect fit, suit technicians, resembling custom tailors, huddled around Grissom noting the necessary modifications.

While in the suit, he climbed into the Gemini mock-up spacecraft to assess a new seat installation. The mock-up or early version of the spacecraft contains all the actual equipment of the later versions. Individual components such as the seat arrangement can be tested in the mock-up while still in early stages.

The escape system on Gemini is a rocket ejection seat similar to that used on high-performance aircraft. Either pilot or co-pilot can eject both seats up to altitudes of 70,000 feet.

To test the early design of this system, engineers rolled out the seat and Grissom to simulate firing the rocket. During this maneuver clearance measurements between the suit and sides of the spacecraft were recorded.

In his engineering evaluation of suits and seats, Grissom uses his past experience in the Mercury program, his pilot experience, and his knowledge of the Gemini mission.

At noon the McDonnell plant whistle reminded the employees of lunch. Grissom and the engineers working in the mock-up room were impervious to this signal.

They paused only long enough to eat sandwiches and, then, back to work.

As the afternoon wore on, Grissom's glances to his watch became more frequent. He had to be at the Johnsville centrifuge in Pennsylvania the next morning.

He put his flight suit back on and was in the air headed for another day's work miles away. He knew he would soon return to St. Louis for more reviews which will solve other technical problems and bring Gemini closer to its first flight.

Grissom's work is like that of the other 15 astronauts at NASA's Manned Spacecraft Center in Houston. Seven, including Grissom, were chosen for Project Mercury in April 1959. Nine more were added to the space flight pool in September 1962.

Each of these 16 men has to be a "Jack-of-all-trades". His engineering research job combines the talents of a pioneer, athlete, test pilot, reporter, and scholar.

He is a pioneer in the peaceful exploration of space. His challenge is the greatest in the history of mankind -- to land on the moon.

In his athlete's role, he works out on his own time to preserve top physical condition.

Along with physical condition, he maintains flight proficiency by piloting high-performance aircraft. When he flies a jet fighter to meetings at NASA installations or contractor plants, a dual function is served - rapid transportation, and flight experience.

If no plane is available, he flies commercial jet, but the travel time isn't wasted. In the air he usually studies the volumes of technical reports of the aerospace industry.

Each astronaut has his special reporter's "beat" or assignment. He participates in and follows a specific engineering development.

This participation provides a means of maintaining individual and group knowledge as well as providing crew contributions to the development. Some of the assignments are training and simulation, communications, booster development, Project Gemini, and

Project Apollo.

Scholastically, each has at least one degree in science or engineering from such schools as Annapolis, Purdue, Princeton, and West Point. But, an astronaut's education doesn't end with graduation.

They must all study advanced concepts in fields of geology, astronomy, guidance and navigation, and computer theory. In addition, they have had special courses of instruction.

For example, they were trained in selenology or moon geology to learn how to collect moon samples and what samples to bring back to earth.

Astronauts spend over half their time away from home. They often span the continent daily to keep up with their tight schedule.

Gus Grissom had spanned half the continent in his travel from Houston to Johnsville, Pennsylvania. He was met there by astronauts Donald K. "Deke" Slayton and Alan B. Shepard, Jr., America's first man in space.

The Johnsville centrifuge or "The Wheel" as it is called by the astronauts is believed to be the world's largest. The astronauts are not strangers to its accelerations and trained on it extensively for Project Mercury.

But Mercury is finished and the gondola has been fitted with the Gemini manual control and flight displays. The astronauts are now making an engineering evaluation of the Gemini equipment in simulated launch and re-entry programs.

Powered by a 180 ton, 4,000 horsepower electric motor, the centrifuge arm can accelerate from a dead stop to over 170 miles per hour in seven seconds. At this speed the subject in the gondola experiences 40 G's or 40 times the normal gravitational pull.

As the three Mercury astronauts were renewing their acquaintance with the wheel,

11 others were on their way to Los Angeles, California. The conference they were to attend the next morning was a review of the manned moon project Apollo. To prepare for it, some of them had last minute study sessions in their hotel rooms the night before.

Apollo consists of three main sections, or modules. North American Aviation Corporation in Downey, California, is the prime contractor for two of these, the command and service modules.

At the review the astronauts were briefed on the Apollo crew station equipment and its arrangement by N.A.A. designers. For the astronauts, the crew station is their "window" on the operation.

Using the indications and controls in their window, they can determine what is happening throughout the spacecraft. In planning the crew station the astronauts have to certify that all the data displays and regulators they need are being displayed.

At this point their overall management view of the project and engineering background become invaluable. They can understand electrical circuit designs and see how all the systems will affect each other.

They are also alert to possible malfunctions that could jeopardize the mission. Every possible situation must be anticipated.

For the astronauts and engineers the luncheon menu was the same as Grissom's -- sandwiches and milk. This saved the time of adjourning and reconvening, but even so, the meeting lasted ten hours.

Tired and filled with coffee, they checked their schedules for their next assignment.

Astronaut Edward H. White, selected last fall, went from Los Angeles to Edwards Air Force Base. Edwards is located on a 64-square mile desert lake bed in lower

Add 5
MCS 63-127

California. It is the home of the rocket-powered X-15 and NASA's Flight Research Center.

White's special assignment is the design and development of flight control systems. He went to Edwards to evaluate the control systems used in the X-15.

In the X-15, designed for speeds of 4,000 miles per hour, the gravity forces are so severe that the pilot cannot use his conventional control stick. Instead, he employs two side-arm controllers which are operated by wrist movements. They are integrated with the center stick.

White examined these side arm controllers to gain information for the selection of controllers in MSC projects. He talked to the X-15 pilots about the research they had done before deciding on their particular system.

Several pilots were preparing for a mission by practicing the flight plan in a ground-based simulator. The simulator has a cockpit mock-up of the actual X-15, and with the aid of computer equipment the pilot simulates flight conditions.

After a day of questions and testing White returned to Houston.

Astronaut Thomas P. Stafford had remained in Los Angeles an extra day to talk to the NAA engineers further about communication and instrumentation systems in Apollo. He has to insure that the onboard systems are properly integrated with the mission control system, ground operational support and other communication links.

He is well qualified for his duty. Before joining NASA in 1962, he was chief of the performance branch at the Edwards Air Force Aerospace Research Pilot School. There, he established basic textbooks and directed the writing of flight test manuals.

Stafford awakened at 5 AM the next morning for a flight to San Francisco. In the plane he studied charts of the centrifuge programs he would run later at the NASA Ames Research Center.

At Ames, 35 miles south of San Francisco, California, Stafford joined astronaut Elliot M. See, Jr. They were participating in a research program designed for later astronaut training.

The unique five-degree-of-freedom Ames centrifuge imposes stresses on the astronaut that the wheel at Johnsville cannot. The tests are designed to determine the astronaut's ability to read vital instruments during the flight of the spacecraft.

It also tests his ability to react and take proper corrective control actions during the mission.

While a run is taking place, the astronaut is closely "watched" by doctors via a closed-circuit television transmitter in the cabin. This is supplemented by a host of physiological recording devices which also relay the man's reaction to the G force.

An earpiece sensing device is worn by the astronaut to give an indication of his blood flow. The pulse rate and relative blood pressure can be determined from this data.

An analog computer gives the command signal to the electrically driven centrifuge. A rotational speed of 18 revolutions-per-minute is reached in about 20 seconds.

A continent away, Grisson was completing his centrifuge runs. It was Friday afternoon, and, to most people, time for the week-end to begin. But, for astronauts week-ends and workdays seem to run together.

After leaving Johnsville, Grisson had to stop in St. Louis before going home. Saturday he looked in on the progress that had been made on the Gemini pressure suit. By Saturday night he was back in his car and driving home to his family.

On his desk Monday morning, Grisson found a mound of mail. Each astronaut has to answer about 100 letters a week.

They answer letters, hold briefings, and write technical reports in the temporary

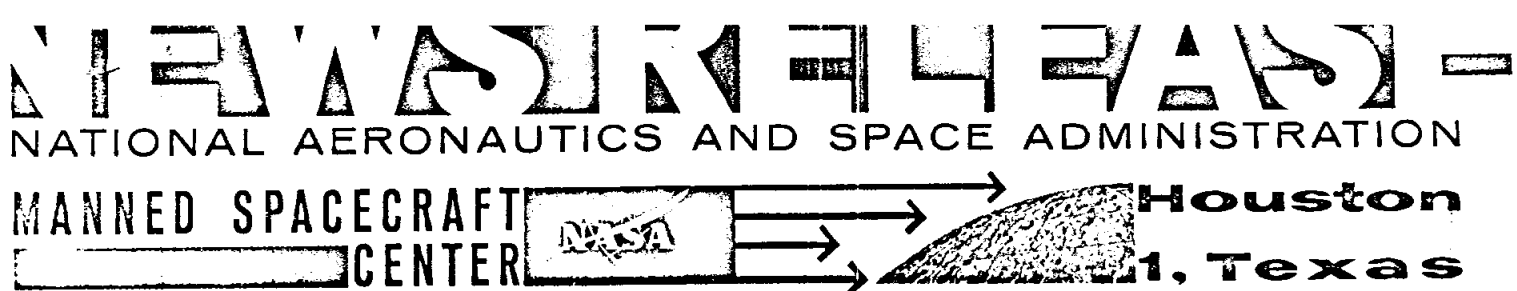
Add 7
MSC 63-127

facilities leased by MSC in Houston. A \$120 million permanent complex will be completed next spring and the 3,000 MSC employees, including the astronauts, will move in.

Also moving will be 10 to 15 more astronaut trainees who will have joined the space team. These men will also have their sights focused on the future. They, like Grissom and the others, will feel the challenge an astronaut faces.

They, too, will be able to close their eyes at night and envision the time when a man clad in a space suit will step out of his spacecraft and onto the age-old symbol of romance and mystery -- the moon.

###



Walnut 8-2811
Extension 3751

MSC 63-128
August 13, 1963

HOUSTON, TEXAS -- Emmit E. Fisher is a specialist in numerical analysis techniques.

At the National Aeronautics and Space Administration's Manned Spacecraft Center, his specialty is applied to monitoring the implementation of the Data Reduction Complex -- the data handling and reducing center for future manned space flight information.

The Complex will be situated at MSC's future home in southeast Houston on a 1600-acre tract of land near Clear Lake. The Center will be occupied by MSC personnel by March, 1964.

The former "acoustics" specialist with the White Sands Missile Range in New Mexico is one of several negroes employed at MSC. At WSMR, Fisher worked in the Data Reduction Division, and in the Research Section of the Signal Division, from 1959 to 1963. He assisted in Aberdeen Proving Ground's Project BANSHEE -- a balloon-hoisted, high altitude burst of explosives to study the propagation of sound waves over distance in the thinner regions of the earth's atmosphere.

Add 1 - Fisher

While he was with WSMR, he authored and co-authored four technical papers on "acoustics".

A native Texas, Fisher hails from the town of Maverick where he was born on August 21, 1933.

He fulfilled his military obligations with the U. S. Army from 1953 to 1956, receiving his basic training at Fort Riley, Kansas. He became an aviation mechanic through Army training at Fort Sill (Oklahoma) Army Helicopter School, and Gary AFB (Texas) Fixed Wing Mechanics School.


He enrolled at Texas Southern University on the "G. I. Bill" and was graduated with a bachelor of science degree in mathematics in 1958. He continued toward his master's degree in applied mathematics, and his degree is pending submission and acceptance of his thesis.

After leaving school, Fisher headed the mathematics department of Dumbar high school in Temple, Texas, for eight weeks. He joined the White Sands Missile Range shortly afterward.

Fisher married the former Margaret Edwards of El Paso, Texas. They have one son, Emmitt Fisher, Jr., who is 18 months old.

###

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
MANNED SPACECRAFT CENTER  Houston, Texas

WAlnut 8-2811
Extension 3751

MSC 63-129
August 13, 1963

HOUSTON, TEXAS -- When Elton A. Wilborn was graduated with a college degree from Seattle University, he was 32 and a father of three boys.

The degree culminated a long, hard struggle for advancement.

Today, a systems accountant with the National Aeronautics and Space Administration's Manned Spacecraft Center, Wilborn feels the struggle was "worth it".

"On board" about two weeks, Elton A. Wilborn works in the Accounting Procedures Section of the Financial Management Division. His section "writes all financial management manuals covering budgeting, accounting, analyses, and auditing procedures within MSC."

Wilborn, a native Texas, was born on May 7, 1919 in the town of Giddings, about 125 miles northeast of Houston. He remained in Giddings through grade school. In 1937, he moved to Dallas where he worked at odd jobs until 1942, when he joined the U. S. Army.

In the Quartermaster Corps, Wilborn moved from island to island in the Pacific during much of World War II. He was honorably discharged in 1945.

Add 1 - Wilborn

Wilborn returned to Dallas to marry the former Sacred Thomas of Gonzales, Texas. A year later, they moved to Seattle where for several years he was a laborer in a laundry.

When he was 29 years old, Wilborn enrolled in the Broadway Edison high school in Seattle, and 12 months later was graduated with a high school diploma. To meet his financial responsibilities, he worked full-time evenings as a storekeeper with the Seattle Army Terminal.

In May, 1950, Wilborn enrolled at Seattle University. In May, 1953, he was graduated with a Bachelor of Commercial Sciences degree.

He worked as a management trainee with Safeway stores in Seattle for one year. After sustaining a back injury, he was dropped from the trainee program. For the next two years, he handled a number of odd jobs. In October 1956, he was hired as an auditor with Auburn Army Depot, outside of Seattle, where he audited financial records. He and his job were transferred to the Utah Army Depot, in Ogden, where he remained until August 1958.

He joined the White Sands Missile Range in 1958 as an Accountant and Auditor with the Finance and Accounting Office there.

Wilborn lives in Houston with his wife and four sons -- Elton A. Wilborn, Jr., 15; Gregory N. 13; Bruce W., 12, and Richard Allen, 9.

###

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
MANNED SPACECRAFT CENTER   Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-130
August 13, 1963

HOUSTON, TEXAS -- Daniel G. Nichols who helped finance his way through college playing basketball is assigned to the National Aeronautics and Space Administration's Manned Spacecraft Center as a mathematician. He is one of several negroes employed by MSC.

His extensive knowledge of digital computers is responsible for his position as coordinator between Flight Operations Division and IBM in implementing the Real Time Computer Complex (RTCC). A vital artery in the Integrated Mission Control Center (IMCC) -- the mission controlling nerve center -- the RTCC gathers flight information from space and the tracking network around the world for instant display in the control center. The IMCC will be situated at MSC's future Clear Lake home, to be occupied by March of 1964, and will begin its operation with the first rendezvous flight in the Gemini program.

Nichols was born on August 7, 1931 in Savannah, Georgia, where he spent most of his childhood. In Korea for 18 months beginning in 1949, he was assigned to the Air Force's 6002nd Fighter Bomber Wing as a water purification specialist.

Add 1 - Nichols

The "G. I. Bill" paid his way through the Savannah State College and he was graduated in 1956 with a bachelor of science degree in mathematics. He won a basketball scholarship during his junior year (his team went to the Small College National Tournament, in Nashville, in 1954).

Beginning in May 1956, he taught high school mathematics at Carver high school in Wadley, Georgia, about 120 miles from Savannah.

Prior to his employment with MSC, Nichols worked at the White Sands Missile Range, New Mexico, as a mathematician and programmer. He worked in the Range's Flight Simulation Laboratory, programming such digital computers as the UNIVAC 1103 and 1103A, and IBM 704 and 7094 in support of WSMR projects.

Nichols married the former Lee Rutha Watson of Houston. They have two children: Michael, 4, and Kimberley Evette, 11 months.

###

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT CENTER  Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-131
August 13, 1963

HOUSTON, TEXAS -- A young electronics engineer at the National Aeronautics and Space Administration's Manned Spacecraft Center is busily engaged in "shrinking" electronic components.

Carrington H. Stewart, an aerospace technologist and one of several negroes employed at MSC, is involved in designing audio microcircuits for spacecraft communications systems in future manned space flights.

Microcircuitry is an electronic art of reducing individual electronic components (resistors, inductors, transistors, capacitors, etc.) and their countless soldered connections into thin films of vaporized metals. Through several unique processes, these metals are sprayed layer upon layer on miniature ceramic or glass bases through stencil-like masks. Many times whole circuits, consisting of many components, can be sprayed on a base the size of a postage stamp.

"Miniaturizing electronic circuitry not only increases reliability by eliminating interconnections, but also saves space, weight and power consumption of electronic equipment in space," Stewart explained.

Add 1 - Stewart

Stewart has been with the Flight Data Branch of the Instrumentation and Electronic Systems Division since June, 1962.

Prior to his employment with MSC, Stewart worked at the White Sands Missile Range's flight surveillance office. In the position of field engineer, Stewart monitored for flight safety flights of missiles under test. Missiles tested at White Sands were the Army CORPORAL, SERGEANT and REDSTONE, and the Navy AEROBEE used for high altitude scientific investigations. He also participated in laboratory experiments developing various instrumentation for improving flight safety during missile launches.

Stewart was born in Sherman, Texas, on September 13, 1939. His parents moved to Waco when he was three years old. In Waco, he was graduated from A. J. Moore high school in May, 1956, and from Prairie View A & M in May, 1960, with a bachelor of science degree in electrical engineering. He became employed by WSMR in September, 1960.

Stewart is the son of Mrs. O. M. Stewart, 619 South Second Street, Waco, Texas.

###



Walnut 8-2811
Extension 3751

MSC 63-132
August 13, 1963

HOUSTON, TEXAS -- A masters degree thesis convinced an outstanding young man to seek a career in civil service.

Tommie Lee Walton, one of many negroes employed by the National Aeronautics and Space Administration's Manned Spacecraft Center, wrote "Job Opportunities in Civil Service" for his masters degree from Texas Southern University. Today, he is a technical illustrator with the Graphics Branch at MSC.

As technical illustrator, Walton provides engineering and managerial visual display material, such as flip charts, slides and diagrams, to assist MSC personnel in the presentation of their projects.

With MSC since March 1962, Walton is included among the "old timers" who wear one-year pins. MSC, the youngest of NASA's centers, got its official designation in the latter part of 1961.

Walton was previously employed at Ellington Air Force Base from 1956 to 1959, where he worked as an engineering draftsman for base facilities. In 1959, he became Chief Engineering Draftsman and supervisor of three engineering draftsmen under him. During this period, through evening and weekend study, Walton completed his academics for a masters degree in Education from TSU in Houston. Shortly afterward, his thesis awarded him the degree in 1961.

Add 1 - Walton

Walton was born in Houston on June 1, 1929. He attended Douglass Elementary School and was graduated from Jack Yates High School in 1948. He enrolled at Prairie View A&M College (Prairie View, Texas) and received a BS degree in Industrial Education in 1953. He was named Distinguished Military Student for his outstanding ROTC record.

Commissioned a second lieutenant in the U. S. Army, Walton was assigned to a Weapons Committee as instructor at Fort Hood, Texas. Later, he became platoon leader in the 25th Armor Infantry Battalion. He was transferred to Fort Benning, Georgia (December, 1953) for advanced infantry officers training for four months, and in Japan completed additional training prior to assignment in Korea.

For his service in Korea from April 1954 as platoon leader with the 17th Infantry and, later, as troop information and education officer for the Regiment, Walton received the National Defense Service medal, the United Nation's Service medal, and the Korean Service medal. He also wore the Expert Infantryman badge.

Two months prior to his separation from the service, at Fort Hood, he became Commanding Officer of an Armored Infantry company.

Walton holds the rank of Captain in the U. S. Army Reserve.

Walton married the former Rosa Margaret Wilson of Port Arthur, Texas. They have a daughter, Vicki Lynn, who is 12 years old.

###

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT CENTER   Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-133
August 13, 1963

HOUSTON, TEXAS -- Victor Rhoder, one of several negroes employed by the National Aeronautics and Space Administration's Manned Spacecraft Center, was a "free lance" photographer before joining MSC in July, 1962.

Now, a technical photographer, he assists engineering development at MSC by taking detailed, technical photographs of tests and equipment under test.

With no assigned "beat", Rhoder's work is highly varied.

One day he may float on a shrimp boat in Galveston Bay for 32 hours covering on film the flotation characteristics of a specially designed life raft.

Another time, airborne in an Air Force C-119, Rhoder may aim his camera on the descending canopy of a new parachute configuration during a drop test to capture on film the "aerodynamics" of canopy deployment.

Victor Rhoder was born on a small farm eight miles outside of Edna, Texas, on August 9, 1929. After rural schooling to the seventh grade, he commuted to Edna to continue his education through high school.

Add 1 - Rhoder



Rhoder came to Houston in 1950 to pursue employment and worked as an orderly in several Houston hospitals. He joined the U. S. Army and was sent to Fort Leonardwood (Missouri) for basic training, and to Fort Belvoir (Virginia) where he was trained as an instructor in the maintenance and operation of heavy equipment. Honorably discharged in 1954, he returned to Houston for several months, then was hospitalized at the Veterans Administration hospital with a service-connected disability for 14 months.

He went through Texas Southern University on the "G. I. Bill", and was graduated in 1961 with a bachelor of science degree in Industrial Education. At TSU, he worked on the school newspaper staff as a photographer, and was considered the "school photographer" for many TSU projects.

Rhoder is married to the former Majorie Chavis of Church Point, Louisiana. They have four children: Micheyl, 6; Andria Marie, 4; Victor III, 2; and Harold, 11 months.

###

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
MANNED SPACECRAFT CENTER   Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-134
August 13, 1963

HOUSTON, TEXAS -- Joseph T. Barker is a member of a Manned Spacecraft Center team developing portable life support systems to be carried by astronauts outside their spacecraft in space and on the surface of the moon. He is one of many negroes employed by the National Aeronautics and Space Administration.

The tote-able "back-packs" hold communication equipment, life-giving oxygen and other vital elements necessary to support life in space. They will be worn by Gemini astronauts when they step out of their spacecraft into space, and by Apollo astronauts when they explore the surface of the moon.

An aerospace engineer, Barker joined MSC in June, 1962, after he was graduated from Prairie View A&M with a bachelor of science in mechanical engineering. As a mathematics major in college, Barker took a part-time position teaching mathematics (one class, three sessions a week) to freshmen during his junior and senior years.

He was student member of the Texas Society of Professional Engineers, one year heading the chapter as its president with a membership of 75 students.

Add 1 - Barker

Barker was born in Houston on August 10, 1936. When he was eight years old, his parents moved to Tacoma, Washington. Barker attended McCarver junior and Stadium high schools, leaving the latter during his senior year to accompany his parents to Wiesbaden, Germany. His stepfather, Lt. Col. Seth Finley (now retired), was being transferred to Germany on Air Force assignment.

Barker entered military service with the U. S. Army in 1955. Shortly afterward he completed an examination (G. E. D.) which gave him a high school graduate standing, acceptable in most states. Completing training at Fort Bragg (N. C.) with the 82nd Airborne Division, Barker was transferred to the 11th Division in Augsburg and Munich, Germany. A paratrooper with the airborne infantry, Barker made 25 jumps.

Barker married the former Richardine Moore of Houston. They have two children: Dinetta Terese, 2, and Derrick, 8 months.

###

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

**MANNED SPACECRAFT
CENTER**

NASA



**Houston
1, Texas**

Walnut 8-2811
Extension 3751

MSC 63-135
August 15, 1963

HOUSTON, TEXAS -- Gemini astronauts will learn how to "apprehend" another vehicle traveling in space on a special trainer in a darkened, hangar-high structure now being erected at Manned Spacecraft Center's Clear Lake home.

The \$1.4 million McDonnell translation and docking trainer will be installed and operating by April, 1964. Called a dynamic trainer, it will give Gemini astronauts, and Apollo candidates, practice in docking and rendezvousing with another orbiting object.

The trainer consists of two vehicles. There is the Gemini cockpit in which two astronauts can run through a rendezvous "mission" at the same time, and the Agena target vehicle.

During rendezvous-scheduled flights in 1965, the Agena target vehicle will be launched into orbit first from Cape Canaveral. After the Agena's orbit is established, the Gemini spacecraft with two astronauts will be lofted into orbit atop a Titan II launch vehicle. The spacecraft's orbit will be computed to "catch up" with the Agena.

- more -

The spacecraft radar will "lock on" its target about 250 nautical miles away. Guided by computer, the astronauts will begin maneuvering toward the Agena. Attitude and translational thrusters will give the spacecraft six degrees of control.

At about five miles from the target, the astronauts will take over visually.

It is this manual portion limited to 100 feet instead of five miles that will be simulated on the Clear Lake trainer.

The trainer with both vehicles has six degrees of freedom. The Agena "vehicle" has 100 feet travel longitudinally, and 16.5 feet (plus or minus) vertically. The Gemini "spacecraft" has 24 feet travel (plus or minus) laterally, and pitch, roll and yaw capability to 45 degrees (plus or minus).

The entire trainer "floats" on air bearings to give the two vehicles minimum friction and maximum smoothness during "response" to pilot control.

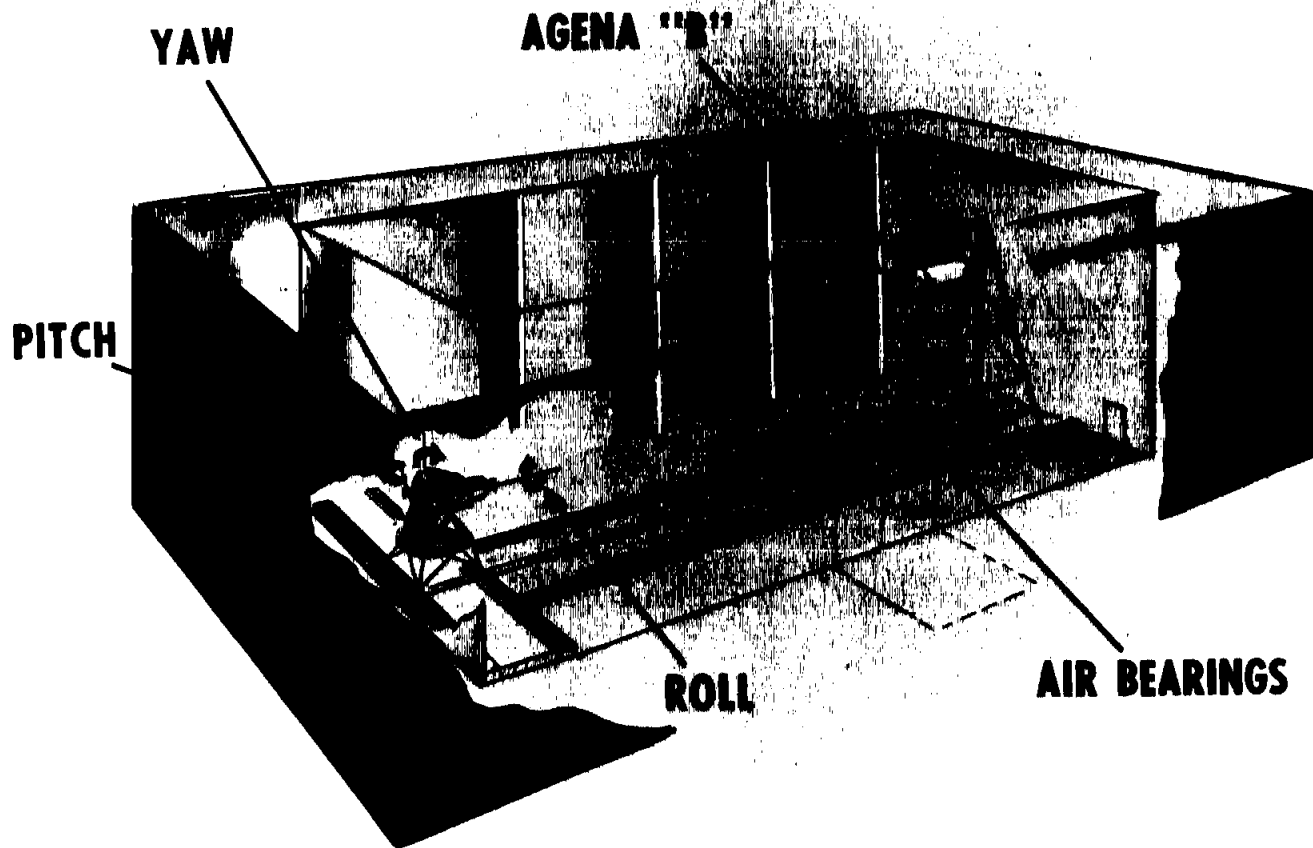
The temporary structure at Clear Lake will house the trainer until the permanent trainer building (#5) is completed in 1965. It covers 8,600 square feet, stands 52 feet high and measures 144 by 60 feet in area. Cost of the structure, including an analog computer to drive cockpit displays, amounts to less than \$250,000.

Upon completion of the Gemini program, the trainer will be converted to simulate the Apollo rendezvous phase of the lunar mission. The Command and Lunar Excursion modules will be substituted for the Gemini and Apollo vehicles.

The Apollo's immediate goal is to land two U. S. astronauts on the moon by 1970.

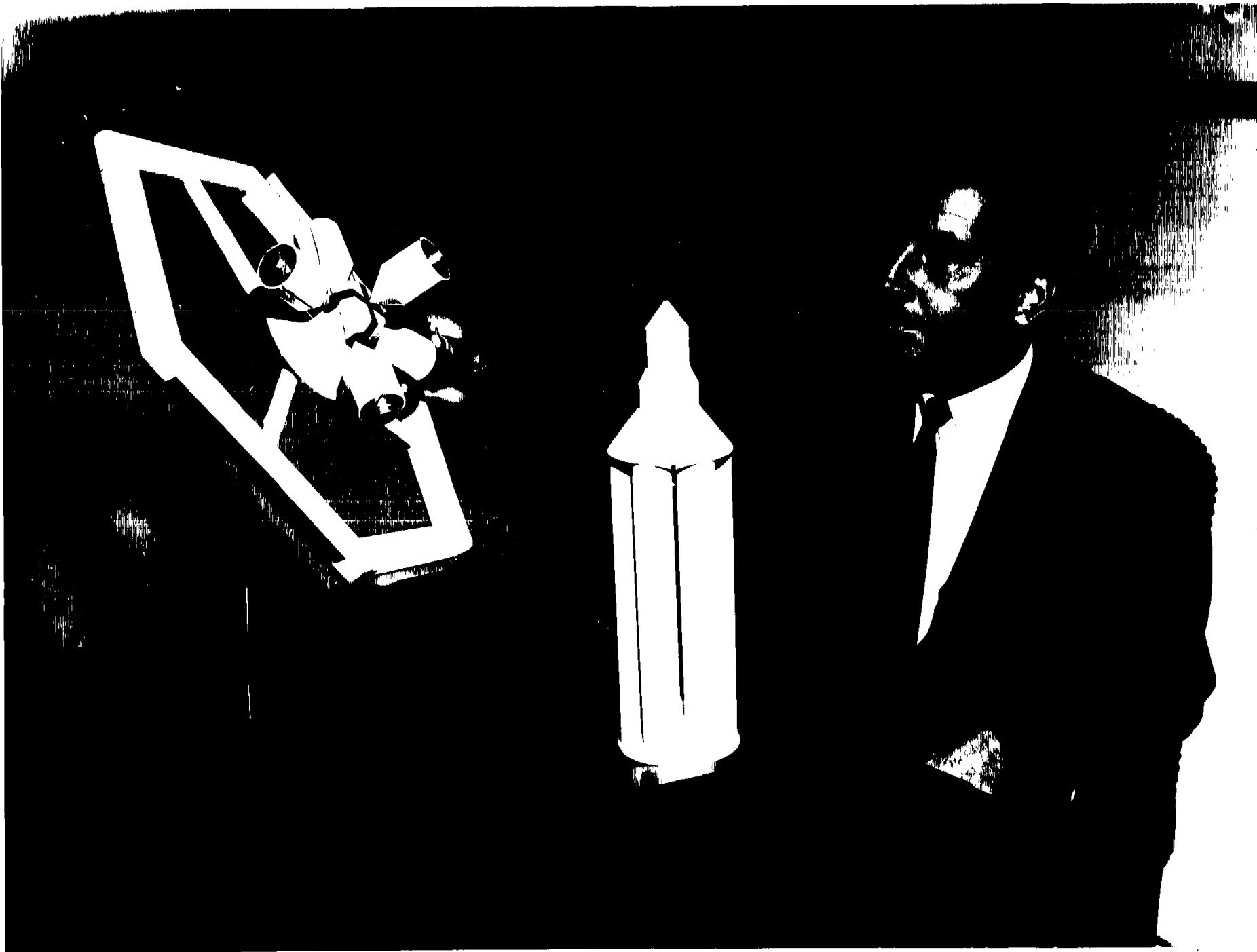
###

GEMINI TRANSLATION AND DOCKING TRAINER



NASA
S-63-10895

MSC-67 / 76



NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT CENTER



Houston 1, Texas

Walnut 8-2811
Extension 3751

MSC 63-137
August 20, 1963

HOUSTON, TEXAS -- A Project Mercury Summary Conference, sponsored by the NASA Manned Spacecraft Center, will be held here October 1 and 2. The papers will review experiences and knowledge gained in the now-completed spaceflight program.

Highlights of the two-day conference will be summary reports on manned spaceflight and on Astronaut Gordon Cooper's 22-orbit mission. Other papers will cover flight crew training, launch vehicles, aeromedical and scientific experiments and an overall technical summary.

In addition to presentations by MSC personnel, NASA Headquarters, the Goddard Spaceflight Center and the Department of Defense will contribute to the program. An exhibits display also is planned.

The conference is to be held in Houston's Music Hall. Admission is by invitation and is open to the press.

dg

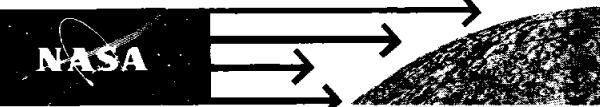
From: News Media Communications Branch
Public Affairs Office
Manned Spacecraft Center
Houston 1, Texas

Note to editors: A conference news center will be in operation in the Coral Room of the Music Hall. Media representatives will be accredited there. For planning purposes, we would appreciate advance knowledge of your intention to cover.

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT
CENTER



**Houston
1, Texas**

Walnut 8-2811
Extension 3751

MSC 63-138
August 21, 1963

HOUSTON, TEXAS -- Jinichi Ohtsuki, senior reporter for the Yomiuri Shimbun, one of Tokyo's leading newspapers, will visit the Manned Spacecraft Center Thursday (August 22).

He will spend the day interviewing MSC officials and touring the Clear Lake site.

Ohtsuki is visiting the United States as a participant in the Foreign Leader Exchange Program sponsored by the Department of State.

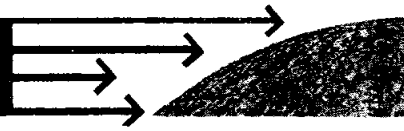
dg

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNNED SPACECRAFT
CENTER

NASA



Houston

1, Texas

Walnut 8-2811
Extension 3751

MSC 63-139
August 23, 1963

HOUSTON, TEXAS -- A speech prepared for presentation by Donald T. Gregory, Technical Assistant to the Director of the NASA Manned Spacecraft Center, was given on August 23 in Miami, Florida.

Entitled "The Pursuit of Space Knowledge," the talk was made to nearly 1,000 educators during Welcome Day for New Teachers. Sponsoring the workshop for teachers new to the Dade County public school system was the Miami Chamber of Commerce.

Synopsis - THE PURSUIT OF SPACE KNOWLEDGE

It can and must be the job of our educators to watch the events of the space age as they take place and translate their significance to the young minds that are now ready to receive this knowledge. It is not only the work of the teachers of chemistry or physics or math. It is the job of the whole teaching community.

Filling the demand for highly skilled engineers and scientists is a real problem. The demand for new engineers in the U. S. now runs approximately 60,000 per year while only 33,700 graduated in 1963 -- down from 38,000 in 1959. A similar situation exists in the physical science fields.

- more -

A-1d 1

SC 63-139

It is apparent that we must motivate our young people and it is obvious we cannot start too early. While we cannot interest every young man or woman in becoming an engineer or scientist, we should make every effort to teach all of our children the meaning of science in everyday life. To bypass the relation of the space program to our way of life would leave a large gap in the education of our nation.

dg

(Note to editors: Copies of THE PURSUIT OF SPACE KNOWLEDGE are available on request)

August 23, 1963

NOTE TO EDITORS:

The Public Affairs Office, Manned Spacecraft Center periodically reviews its news media mailing list in order to keep it current.

If you do not wish to continue receiving news releases, please check appropriate box and return to:

John J. Peterson, Chief
News Media Communications Branch
Public Affairs Office
Manned Spacecraft Center
Houston 1, Texas

- () Do not wish to receive news releases.
Please show name and address of publication.

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNNED SPACECRAFT
CENTER



**Houston
1, Texas**

Walnut 8-2811
Extension 3751

MSC 63-140
August 27, 1963

HOUSTON, TEXAS -- NASA's Manned Spacecraft Center has asked for proposals from industry for development of an air atmosphere furnace capable of generating temperatures to 3,000 degrees Fahrenheit.

The furnace is intended for use in evaluating coatings on refractory alloys proposed for use in development programs in future manned spacecraft.

Proposals are to be submitted by September 5 and delivery of the furnace is called for 180 days after receipt of the notice of contract award. Furnace and associated control equipment will be installed in the Systems Evaluation Laboratory at Clear Lake for MSC's Systems Evaluation and Development Division.

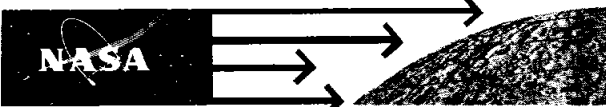
The proposal calls for a unit approximately six feet long by six feet, four inches high and nearly five feet wide. Chamber dimensions will be three feet long by 18 inches wide by 18 inches in height.

The furnace doors will be air cylinder operated. Chamber insulation will be high temperature brick and an atmosphere circulation system will be installed to permit continuous distribution through the chamber and insure a ± 25 degrees F temperature uniformity.

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNNED SPACECRAFT
CENTER



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-141
August 28, 1963

HOUSTON, TEXAS -- "Banking on the Future," is the subject of a talk to be given September 5 by Wesley J. Hjernevik, Assistant Director for Administration for the NASA Manned Spacecraft Center.

The speech will be made to approximately 300 central Illinois bankers in Decatur during Bankers Day. The meeting is sponsored by the Millikin National Bank.

Hjernevik's speech will cover the manned spaceflight program starting with Project Mercury and continuing through the Apollo lunar landing. He notes that the technical advances generated by the moon program will bring a new standard of living, better education and new methods for production.

These benefits will come in the future even though "they are not evident to us now," Hjernevik states.

He joined the National Aeronautics and Space Administration in Washington, D. C. in 1958 as Assistant to the Administrator. His specialty was tackling organizational and programming problems. Hjernevik was a member of the advisory group that surveyed locations for the Manned Spacecraft Center prior to its move from Langley Air Force Base, Virginia to Houston.

In his present position, he is responsible for directing all internal administrative support for the Center.

- more -

Add 1
MSC 63-141

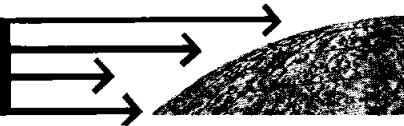
Hjornevik graduated from North Dakota State College in 1949 with a bachelor of science degree in economics. He is a native of Minneapolis.

dg

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT
CENTER



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC63-142
August 28, 1963

HOUSTON, TEXAS -- Some high school students with a space program of their own are touring the Manned Spacecraft Center August 29-30.

The 18 students from Northeast High School, Philadelphia, Pennsylvania, have an ambitious extracurricular science program named Project Sparc after Space Research Capsule. Project Sparc will culminate in the construction of a capsule simulator that three students can "fly" to the moon and back.

More than 50 members of the Sparc group have put in eight months of study and research on the project. The students visiting MSC are the nine Sparc-selected "astronauts" and the research group leaders.

The student-astronauts were selected from 58 volunteers on the basis of physical and psychological tests and the background of the individual students. They will be trained to operate the Sparc capsule and the ground control system for simulated test flights.

The Sparc simulator will have full exterior visual effects of a circumlunar flight provided by planetarium projection. Pitch, yaw, and roll movements of the three-man capsule-simulator will be allowed by a system of gimbals.

Add 1
MSC 63-141

The cabin will contain flight plan instruments, short wave communication, and a closed circuit television system. The three astronauts will have their own space suits and will eat food prepared for the weightless condition of space.

On their way to Houston the Sparc group visited the NASA Marshall Space Flight Center in Huntsville, Alabama. They will return home via the Launch Operations Center at Cape Canaveral and the Goddard Space Flight Center, Greenbelt, Maryland.

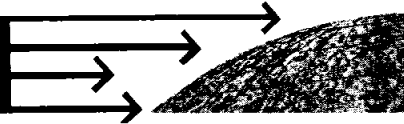
###

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT
CENTER

NASA



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-143
August 28, 1963

HOUSTON, TEXAS -- The Manned Spacecraft Center of the National Aeronautics and Space Administration is soliciting industry for development of a large radio frequency shielded enclosure to be used to determine if component parts of Apollo and LEM flight equipment are susceptible to radio frequency interference.

The proposal calls for a rectangular shaped unit with inside dimensions that measure 20 feet long by ten feet wide and eight feet high. It is to be a solid structure of copper and sheet steel capable of being disassembled and reassembled.

Interior of the chamber will be painted gray and the floor is to be covered with tile. Entry is gained through a single door installed at one end of the enclosure.

The contractor also will be required to provide an air conditioning system of sufficient size to maintain an interior temperature of 68 degrees Fahrenheit during operations. Air conditioning will be mounted outside the shielded enclosure.

Delivery of the unit is called for 30 days after receipt of written notice of contract award. Installation will be in the Rich Building for MSC's Instrumentation and Electronics Division.

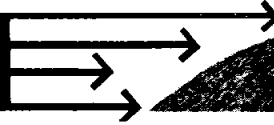
dg

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT
CENTER

NASA



Houston
1, Texas

Walnut 8-2811
Extension 3571

MSC 63-144
September 4, 1963

HOUSTON, TEXAS -- A vacuum chamber to generate space environmental conditions for use in thermochemical tests has been requested from industry by the NASA Manned Spacecraft Center. The chamber will permit MSC engineers to study the function of propellant equipment, heat rejection and energy collecting devices during long periods of flight.

The vessel will look like a bathysphere on stilts. It will stand more than 22 feet tall including the four steel support columns. Inside dimension of the unit will be 15 feet. It will be equipped with a door having an opening of nine feet in diameter. The chamber will be fashioned out of stainless steel.

A special feature of the space chamber will be the installation of burst discs. These are safety valves which rupture in the event of test equipment failure during testing.

The contractor has been asked to provide an area for a second opening directly opposite the entry door. This is for tests planned for the future. It is to be used for installation of such accessories as solar simulators and other special equipment.

Add 1

~~MSC 63-144~~

Proposals are to be submitted by September 20 and delivery, installation and check out of the thermochemical space chamber is called for not later than nine months after receiving notice to proceed with work. The chamber and associated equipment will be installed in the Thermochemical Space Chamber Building at Clear Lake for MSC's Systems Evaluation and Development Division.

Equipment to be tested will be placed in the chamber by means of a removable monorail system. The system must be capable of handling loads up to three-quarters of a ton.

In addition to the vacuum chamber, industry has been asked to supply a shroud for the liquid nitrogen cooling system, a pumping system, instrumentation and controls and load handling equipment.

The proposals are to be submitted in two parts. The more important one is the technical proposal. The other is the business management one. The facility is to be designed to a useful test life of ten years without need for major replacement.

dg

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT CENTER  **Houston**
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-145
September 5, 1963

HOUSTON, TEXAS -- A speech prepared for presentation by Wesley Hjernevik, Assistant Director for Administration at the NASA Manned Spacecraft Center, was given on September 5 in Decatur, Illinois.

Entitled, "The Apollo Program," the talk was made to approximately 300 Central Illinois bankers during Bankers Day. The meeting was sponsored by the Millikin National Bank.

Synopsis - THE APOLLO PROGRAM

The Apollo program is important in that it provides the United States with a clearly defined goal; a goal that is a challenge to this nation's strength and technical ability, but feasible and achievable within this decade.

On the first lunar mission, the total length of stay on the moon will be about 24 hours. After completing their exploration and sleeping a few hours, two astronauts will take off in the Lunar Excursion Module and rendezvous with the third man in the Command Module and return to earth.

- more -

Add 1
MSC 63-145

Why space exploration? Man ventures into space to increase his scientific knowledge about the universe and this increased knowledge results in unpredictable economic gains. There have been specific payoffs for use on earth. Weather prediction is one such field. The ability to forecast weather accurately in detail as much as five days in advance saves billions of dollars annually in the fields of agriculture, transportation, marketing and management of water resources.

dg

(Note to Editors: Copies of THE APOLLO PROGRAM are available upon request)

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT
CENTER

NASA



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-146
September 10, 1963

AIR FORCE FLIGHT TEST CENTER, Edwards AFB, Calif. -- Norman Belasco spoke today to the Space Rendezvous, Rescue, and Recovery Symposium about the problems of crew transfer from vehicle to vehicle in the weightless space environment.

Belasco, head of advanced technology in the Crew Systems Division of NASA's Manned Spacecraft Center, said that there are two primary problems in transferring men from one space vehicle to another or between compartments of a single vehicle.

He classified the problems as maneuverability, locomotion, and propulsion, and protection and support during the transfer. He pointed out the factors that limit the time of transfer in a pressurized suit and the means for increasing the allowable transfer time.

Belasco also talked about the techniques of transferring men which differ according to the distance involved. For distances less than 100 feet manual devices such as lines, poles, or tunnels will suffice. For greater distances a powered propulsion system will be necessary.

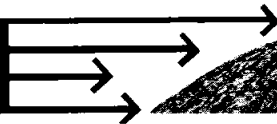
###

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT
CENTER

NASA



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-147
September 6, 1963

HOUSTON, TEXAS -- The NASA Manned Spacecraft Center announced today the signing of a definitive contract valued at \$7,658,000 with the Kollsman Instrument Corporation of Elmhurst, New York for guidance and navigation equipment for the Apollo spacecraft Command and Service Module.

The contract with Kollsman Instruments is for the optical subsystem, a map and data viewer and related ground support equipment which are necessary to the performance of the spacecraft's guidance and navigation system.

Under separate contract, the Massachusetts Institute of Technology is responsible for design of the guidance and navigation system. The Raytheon Company of Sudbury, Massachusetts is providing the onboard computer and A. C. Spark Plug, Division of General Motors in Milwaukee, Wisconsin is to assemble the unit.

The optical subsystem consists of a scanning telescope and sextant, which will enable astronauts to make visual celestial sightings during their space journey. The map and data viewer will provide the astronauts with instantaneous navigational information and filmed data which will be available for ready reference during all phases of the flight.

Add 1
MSC 63-147

MSC selected Kollsman to develop the optical subsystem for Apollo on May 28, 1962 after an industry competition. Since that time the company has been working under a letter contract and \$3,700,000 of the total amount has been funded. The newly signed contract calls for delivery of all hardware to A. C. Spark Plug by August 1, 1964.

Work on the optical subsystem will be done at Kollsman's Syosett, New York plant.

The Apollo lunar program is designed to land an astronaut team on the moon and return them to earth. Space flight hardware consists of three major items: The Command Module, Service Module and Lunar Excursion Module (LEM).

The Command Module will be designed to carry three space pilots to the vicinity of the moon. The Service Module will contain the propulsion system and equipment to support the Command Module.

As the spacecraft approaches the moon, two of the Apollo team members will enter the LEM, detach themselves from the craft and descend in the LEM to the moon for surface exploration.

The lunar landing is to be accomplished before the end of the decade under the space program outlined by President Kennedy.

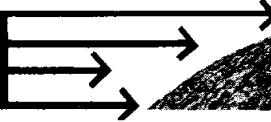
dg

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT
CENTER

NASA



Houston
1, Texas

Walnut 8-2811
Extension 3571

MSC 63-148
September 13, 1963

HOUSTON, TEXAS -- The first "class" of Aerospace Summer Interns have graduated and are returning to school for the Fall semester.

In a Manned Spacecraft Center conference room 26 interns were given certificates of participation by Paul Purser, Special Assistant to the Director, and Philip Whitbeck, Deputy Assistant Director for Administration.

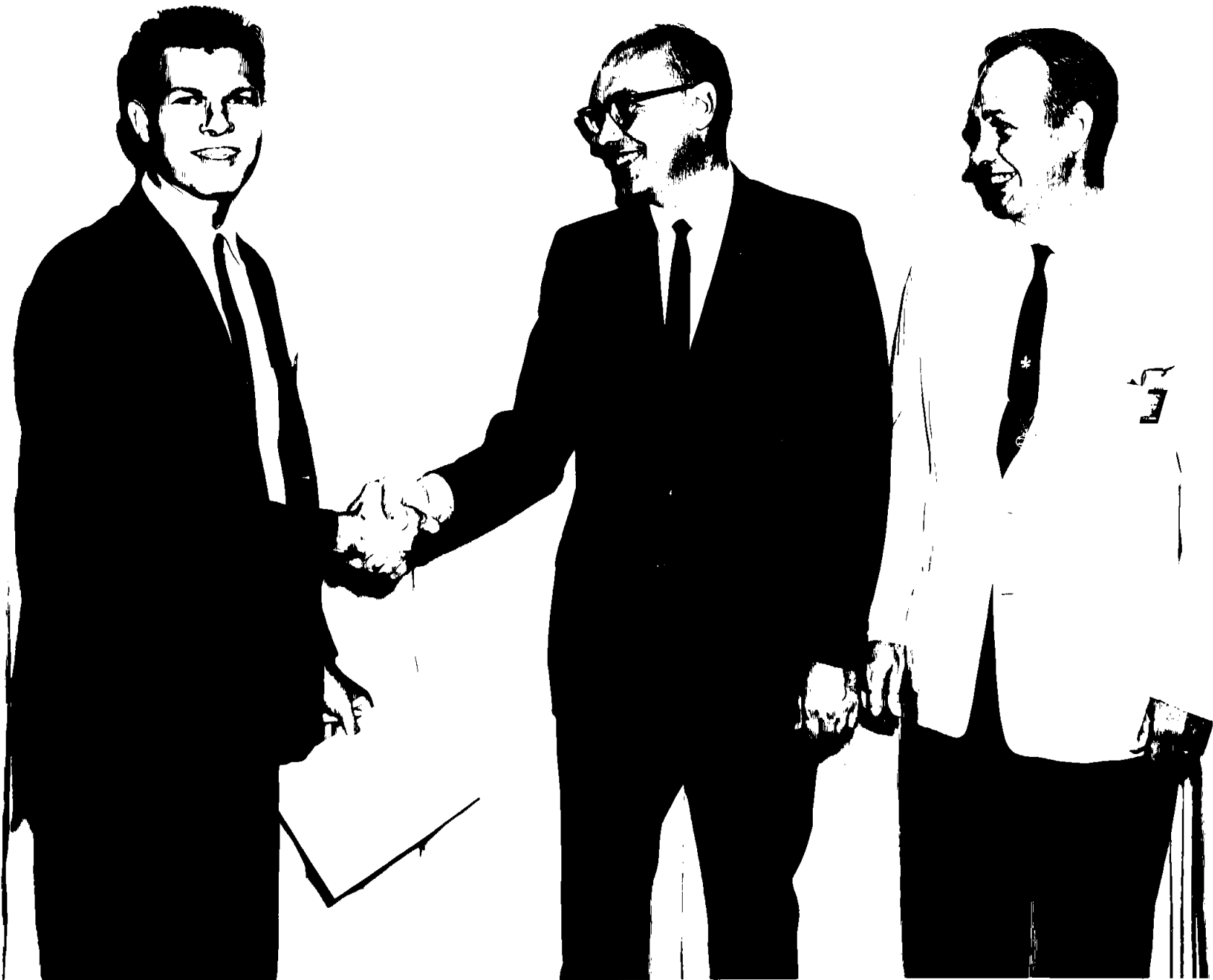
The unique program, announced last February by Dr. Robert Gilruth, MSC Director, gives outstanding students an opportunity to correlate experience with academic training.

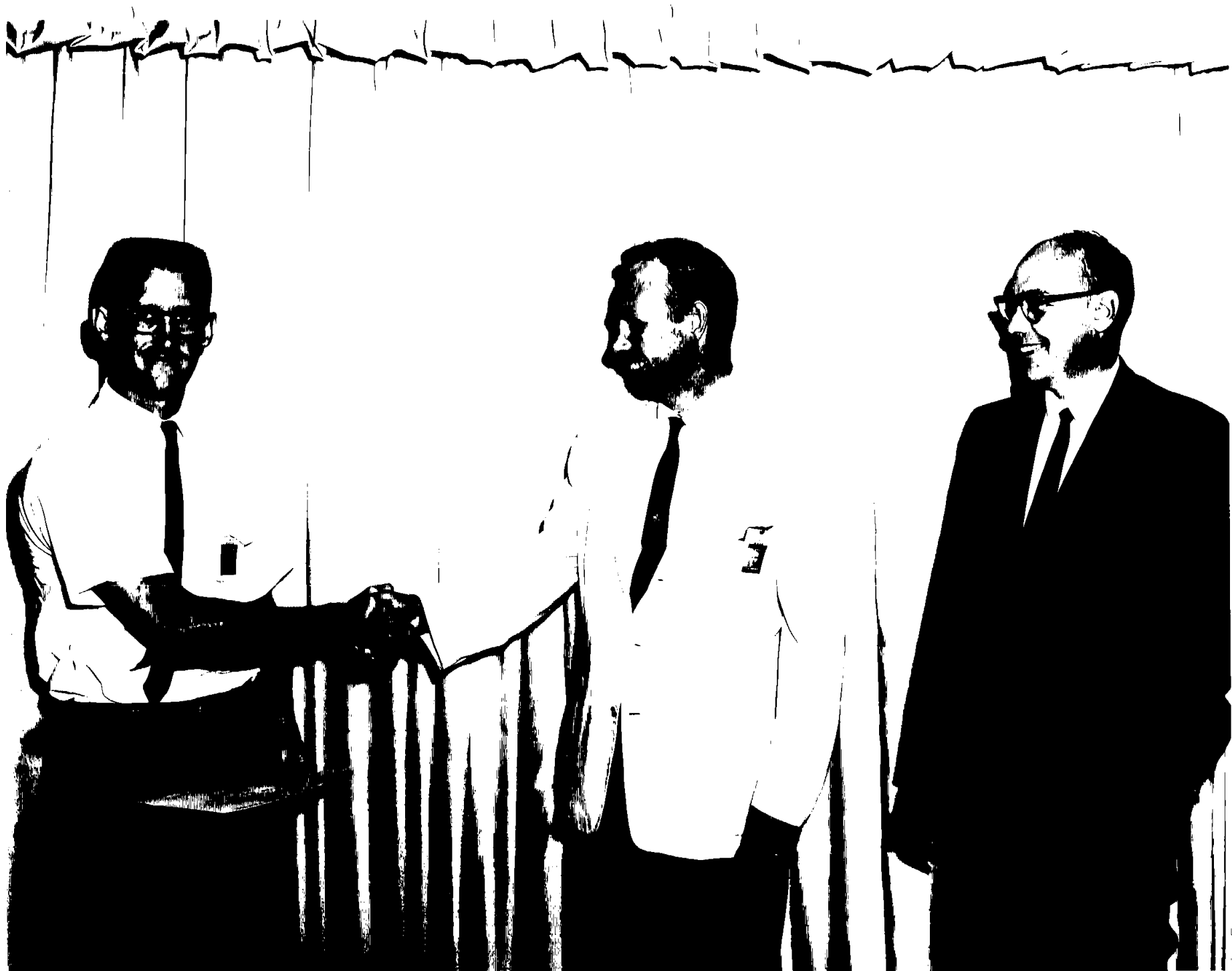
The students, representing universities and colleges in 13 states, were divided into two groups according to their academic field.

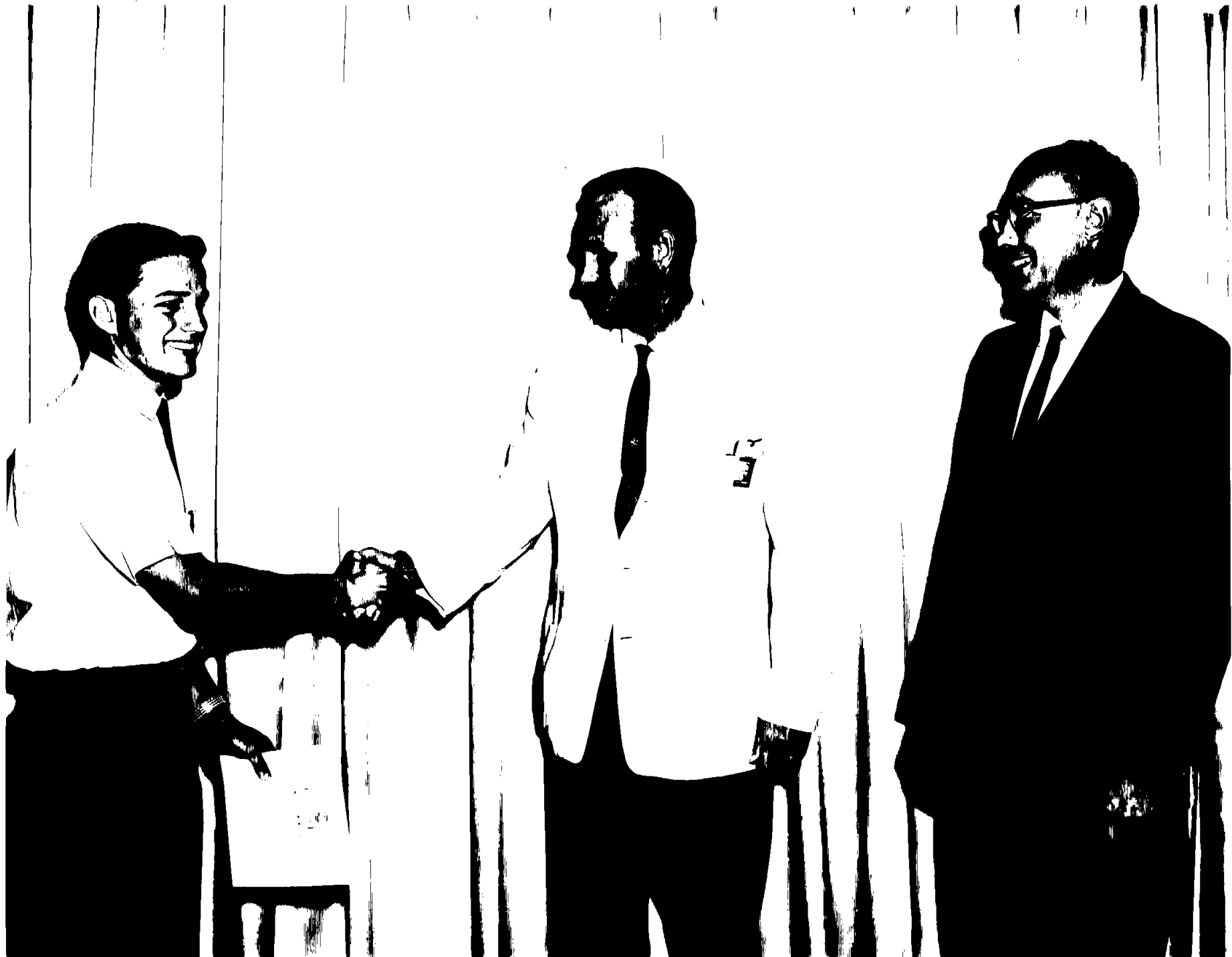
The 16 scientific and engineering interns attended a one-hour class daily in Spacecraft Engineering, Design, and Operation. This course was developed by senior technical staff members of MSC based on the experience and data gained to date from the Mercury, Gemini, and Apollo projects.

Ten public and business administration majors had a weekly two-hour seminar comparable to graduate courses in management theory.

###











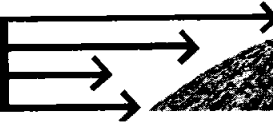


NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT
CENTER

NASA



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-149
September 10, 1963

HOUSTON, TEXAS -- "Mexico and the Mercury Program," is the subject of a talk to be given September 13 by Walter C. Williams, Deputy Director for Mission Requirements and Flight Operations at the NASA Manned Spacecraft Center, in Monterrey.

The speech will be made during U. S. Mexican Cultural Week, part of a month-long independence celebration held by the Mexican government.

The Williams' speech will cover the Mercury program with emphasis on the important communications part played by the Guaymas tracking station during spaceflight. Williams notes that four of the original seven astronauts have visited Guaymas during one flight or another.

An increase in knowledge of the universe is coming from the space program, Williams states, and the new facts we hope to learn from future programs can be used to the fullest extent by all people.

Williams joined the National Advisory Committee for Aeronautics in 1940 at Langley Air Force Base, Virginia. His specialty was in the area of stability and control on aircraft used in World War II.

Add 1
MSC 63-149

Later he was assigned to the X-1 program and worked on the development of high speed aircraft. He was NASA project manager for the X-15 program before entering the Mercury program. He was Flight Director for Mercury, the first U. S. Manned Space flight program. In 1962 he received the NASA Distinguished Service Medal for his contributions to space flight research.

Williams graduated from Louisiana State University in 1939 with a bachelor of science degree in aeronautical engineering and received an honorary doctorate degree from the same school in June of this year.

He is a native of New Orleans.

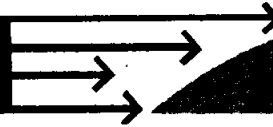
dg

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT
CENTER

NASA



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-150
September 11, 1963

HOUSTON, TEXAS -- Construction of the NASA Manned Spacecraft Center at Clear Lake is 75 per cent complete, Center officials said today, and the first large personnel move is scheduled for October.

Approximately 100 persons from the Logistics Division will move into the Center Support Office building and the Warehouse and Shops building. Completion dates for the two structures are September 29, and the move will be about October 1. The division includes transportation and supply personnel.

Logistics employees presently occupy space at Ellington Air Force Base. The offices they vacate will be occupied by personnel who are still assigned to the now-concluded Mercury program.

Next on schedule for completion will be the Central Data Office. This is the first of the functional buildings directly related to space exploration. It will be turned over by the contractor in November.

The building is a two story structure containing more than 60,000 square feet of space. The data center consists of digital and analog machine rooms, service areas, fireproof storage and offices. It will house personnel and equipment from the Computation and Data Reduction Division.

.d 1
MSC 63-150

The group presently is occupying space at the University of Houston.

Major move from the 14 temporary offices in the Houston area will take place between February 28 and March 23, 1964. At that time, over 2,000 employees, equipment, furniture and office supplies will be relocated. MSC will completely occupy the Clear Lake facility by July 1, 1964.

The Center is being constructed in three major phases. Phase 1 included site preparation, the water wells, drainage ditches and roads. Phase 2 includes service structures necessary to support the space flight program. These are the water treatment plant, a 138 KV electrical substation, a fire station and a heating and air conditioning plant.

Phase 3 includes the research and development laboratories, test chambers, technical service shops and administration building.

Work in Phase 1 is complete, according to James E. Creel, Chief of the Systems and Acceptance Section, Facilities Division; Phase 2 construction is more than 80 per cent finished and Phase 3 is better than 60 per cent complete.

By July, 1964 about \$147,000,000 worth of construction will have been completed or underway. The space flight complex is located 22 miles southeast of Houston.

dg

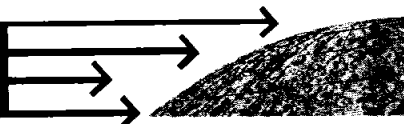
NASA
S-83-14505



NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT
CENTER



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-151
September 13, 1963 a.m. 's

HOUSTON, TEXAS -- Training of NASA Manned Spacecraft Center's 16 astronauts in the techniques of parachute landings on land and water got under way here this week.

The training is designed to instruct the astronauts in making safe parachute landings in the event of a low-altitude abort - under 60,000 feet - during a Gemini launch. In such an abort, the pilots would be ejected from the spacecraft and descend by individual parachute.

In the training, the astronauts each will be towed to altitudes up to 400 feet suspended under an already inflated canopy and will be cut loose for a free descent to earth. Towing will be by a truck for the land descents and power boat for the water descents. Land landings are being conducted at Ellington Air Force Base. The water exercises will be carried out on Galveston Bay.

A specially-designed parachute which ascends when being towed is used in the training. The chute is connected at the end of a 600-foot tow rope. The parachute is designed to obtain maximum safety in the training activities.

Add 1
MSC 63-151

For water landings, the astronauts will wear Gemini-type pressure suits and wear Gemini personal equipment to permit training in procedures in making safe landings with parachutes in the event of ejection from the spacecraft.

The training will include ground school lectures and demonstrations and actual towed flights ending in free-fall descent.

The astronauts will also spend one day at the U. S. Naval School of Preflight, Pensacola, Florida, in water survival training. The training at Pensacola, preceded by water survival lectures at MSC in Houston, will include practice in an enclosed tank in techniques of pressure suit flotation, life raft boarding, underwater egress from spacecraft, parachute extraction, helicopter pick-up, parachute drag escape and shroudline disentanglement.

The complete training course in parachute landings and water survival training will be conducted over a period of several weeks to permit all the astronauts to participate in all phases.

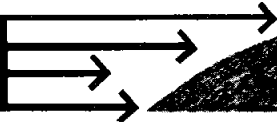
###

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT
CENTER

NASA



Houston
1, Texas

WAlnut 8-2811
Extension 3751

MSC 63-152
September 12, 1963

HOUSTON, TEXAS -- Industry has been requested by the NASA Manned Spacecraft Center to provide a study and models for development of Gemini/Apollo sea retrieval equipment.

The MSC proposal recognizes that Gemini and Apollo weights and sizes exceed the capabilities of existing deck winches and davits on destroyers and destroyer escorts. It is necessary to develop special equipment which can be readily placed on board a recovery ship and retrieve the spacecraft after water landings.

Both the Gemini and Apollo spaceflight programs incorporate ground surface landings. However, some of the early flights will end with water landings. MSC's contingency planning also calls for landing on the water in the event of emergency.

Proposals, to be submitted by October 3, will cover four phases of study. These are design concept, feasibility, preliminary design and model construction.

In the concept study, industry may design retrieval equipment so that it can be quickly attached or removed from the decks of a large number of ships, or the

- more -

Add 1
MSC 63-152

equipment may be more complex requiring modification of the destroyers. In this case, a small number of ships will be fitted out and used.

Other factors considered in the design include weight of the equipment, its shipboard location and production costs.

The study calls for methods of supporting and holding the spacecraft after it is placed on deck. The steps in conversion of retrieval equipment from Gemini to Apollo use or vice versa is to be kept at a minimum and the devices must be reliable so that the safety of astronauts will not be compromised.

Scale models will be built after approval of preliminary designs. The models are for testing retrieval techniques. Testing will be done at the contractor's plant and when the work is finished the models are to be shipped to MSC.

The proposal calls for a fixed-price type of contract. The study is to be completed approximately six months after notice to proceed with work. It will be made for the space agency's Flight Operations Division.

MSC has asked that the proposal be submitted in two parts: one covering technical work and the other covering cost.

dg

NOTE TO EDITORS

NASA's Manned Spacecraft Center and its contractor team associated in the development of the guidance and navigation system for the Apollo manned lunar mission spacecraft will conduct a briefing on the system for news media representatives, including photographers, at 10:30 a. m., Tuesday, September 24, at the Instrumentation Laboratory of the Massachusetts Institute of Technology in Cambridge, Mass. This will be the first such briefing conducted on the system.

Participating in the press briefing will be representatives of the Manned Spacecraft Center and of the four contractors associated in the Apollo guidance and navigation system development: MIT; A. C. Sparkplug Division, General Motors Corporation; Kollsman Instrument Corporation; Raytheon Company; and Sperry Gyroscope Company Division of Sperry Rand Corporation.

Several mock-ups will be on display and a photographic session with briefing participants and mockups will be held after a question-and-answer period.

No advance registration will be conducted for the briefing, but since the building where the conference will take place, Building W-7, 75 Cambridge Parkway, is the site of some classified activity, personal identification and press credentials will be required.

News media representatives desiring additional information regarding the briefing may contact Robert M. Byers, Office of Public Relations, Room 3-339, Massachusetts Institute of Technology, Cambridge 39, Mass.

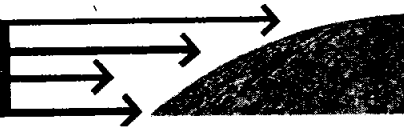
###

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT
CENTER

NASA



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-153
September 17, 1963

HOUSTON, TEXAS -- Nineteen speakers and a comprehensive display of Mercury hardware will highlight the two-day Project Mercury Summary Conference to be held here on October 3 and 4.

Among the speakers, in addition to Dr. Robert R. Gilruth, Director of the NASA Manned Spacecraft Center, will be Dr. Hugh L. Dryden, Deputy Administrator for the National Aeronautics and Space Administration; Walter C. Williams, MSC's Deputy Director for Mission Requirements and Flight Operations and Astronaut L. Gordon Cooper, Jr.

Astronaut Cooper will present a summary flight report on his May 16th 22-orbit mission. Williams will team up with Mercury personnel to present a review of the now-concluded program. Dr. Dryden will make an opening statement and Dr. Gilruth will present the welcoming address.

Spotlight of the exhibits will be on Cooper's Faith 7 spacecraft. Also on hand will be an Atlas D missile, the booster used to rocket U. S. astronauts into

- more -

Add 1
MSC 63-153

orbital spaceflight; a Redstone launch vehicle similar to those used on sub-orbital flights; a Little Joe I test booster; samples of space food and training aids.

Technical papers will cover space vehicle development, mission support, flight operations and mission results.

Presentations by MSC and NASA Headquarters personnel, the Department of Defense, Marshall Space Flight Center, Launch Operations Center at Cape Canaveral and the Goddard Space Flight Center will summarize the program from the research and development stages through operational phases.

The conference will be held in Houston's Music Hall and the exhibits will be display in the adjacent Coliseum. Admission is by invitation.

dg

From: News Media Communications Branch
Public Affairs Office
Manned Spacecraft Center
Houston 1, Texas

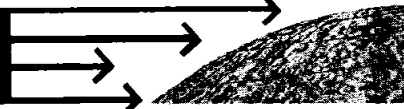
NOTE TO EDITORS: Please note Mercury Review Conference has been changed from October 1 and 2 to October 3 and 4. The conference will be held at the same place - The Houston Music Hall.

Press registration will be in Mercury Review Conference News Center located in the Corral Room, second floor, Houston Coliseum adjacent to Music Hall.

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT
CENTER



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-154
September 23, 1963

HOUSTON, TEXAS -- Four NASA Manned Spacecraft Center personnel will present technical papers September 25 here at the annual convention of the National Business Aircraft Association.

The papers will show the relationship between manned aircraft flight at the lower altitudes and manned spaceflight in outer space.

Speaking on proficiency training of pilots will be Richard E. Day, of the Flight Crew Operations Division. Norbert B. Vaughn of the Cape Canaveral office of MSC's Reliability and Flight Safety Division will talk on testing and maintenance of air vehicles, their instruments and systems.

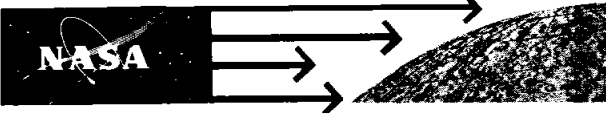
Edward B. Hamblett, of the Mercury Project Office, will talk about communications in space, and Dr. George B. Smith, of the Center Medical Operations Office, will discuss medical testing of pilots.

DG

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT
CENTER



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-155
September 24, 1963

HOUSTON, TEXAS -- Appointment of John J. Peterson, Chief of the News Media Communications Branch, Manned Spacecraft Center Public Affairs Office, Executive Assistant to the Public Affairs Officer has been announced by MSC.

The promotion places Mr. Peterson in charge of the overall administration of the MSC Public Affairs Office, with direct responsibility to Paul Haney, Public Affairs Officer.

A former Army public information officer and newspaper writer on military and scientific affairs, Mr. Peterson has been a member of the MSC Public Affairs Office since April, 1961, and has been in charge of the direct contact with news media for the Center.

In his new position, he will prepare budgets and financial operating plans, review purchases, internal procedures, contract service, and travel, and prepares periodic and special management reports. He will have other staff duties also.

A native of Chester, Pa., and now a resident of Dickinson, Texas, Mr. Peterson retired from the Army as a Captain in 1960 and was military and space writer for the Newport News, Virginia, DAILY PRESS, before joining NASA.


Add 1
MSC 63-155

In his assignment with Manned Spacecraft Center, Mr. Peterson has served as Mercury News Center Manager at Cape Canaveral and in Hawaii for manned space flights in Project Mercury. Recently, he has been in charge of news release on local, national and worldwide scale for Projects Gemini and Apollo, the latter being this country's effort to land two Americans on the moon before 1970.

Mr. Peterson moved to Dickinson in 1962 with his wife, Lorraine, and three children, Elizabeth Susan, Michael Joseph and Patrick Glenn.

His father, Former Police Sergeant Carl Peterson, and his mother, Mrs. Ellen Peterson, reside in Chester, Pa.

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
MANNED SPACECRAFT CENTER  Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-156
September 25, 1963

HOUSTON, TEXAS -- National Aeronautics and Space Administration facilities management personnel from all over the nation are attending a Facilities Management Conference at NASA's Manned Spacecraft Center Thursday and Friday, September 26-27.

A day-long series of sessions dealing with funding, design and construction of facilities for the space program will be held Thursday, culminating with a tour of the new Manned Spacecraft Center now under construction at Clear Lake. Friday will feature a briefing upon the Performance Evaluation and Review Technique (PERT) used by NASA to keep tabs upon its construction programs. In the afternoon committee reports will be discussed.

During the Thursday session, speakers will include Dr. Robert R. Gilruth, Director of Manned Spacecraft Center, who will describe the MSC mission and construction status; Robert W. Long, Director of Construction, NASA Headquarters; who will discuss use of advance design funds; Gerald Ard, White Sands Missile

- more -

Add 1
MSC 63-156

Range, who will describe NASA's expedited construction program there; Ralph E. Ulmer, Director, Review and Analysis, Office of Construction, who will report on the 1963 and 1964 NASA Authorization Acts; Col. R. J. Kasper, Acting Deputy Director, Office of Construction; and Brig. Gen. T. J. Hayes, III of the Army Corps of Engineers, who will talk about construction agent agreements, Corps of Engineers operation and pre-qualification of bidders; and T. Dale Culbertson, Executive Assistant, Office of Construction, who will discuss current and future construction activities.

NASA's Office of Construction was established August 26, 1963, to review and advise NASA officials on the adequacy of the agency's construction work and future plans.

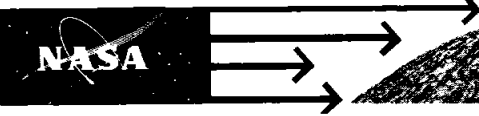
Mr. Long, the director, is a former Kansas City, Mo., construction contractor. He has served as a consultant to Associate Administrator Dr. Robert C. Seamans since June.

###

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT
CENTER



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-157
September 25, 1963

HOUSTON, TEXAS -- The nine new astronauts of the NASA Manned Spacecraft Center completed the water survival phase of their Gemini parachute training September 24 at the U. S. Naval School of Pre-flight, Naval Air Station, Pensacola, Florida.

Training consisted of underwater egress using a special dunking machine; parachute drag escape; life raft boarding, Gemini pressure suit flotation techniques and chute shroudline disentanglement.

Participating were Neil Armstrong, Frank Borman, Charles Conrad, Jr., James A. Lovell, Jr., James A. McDivitt, Elliot M. See, Jr., Thomas P. Stafford, Edward H. White, II and John W. Young.

The purpose of the training is to teach astronauts how to land with a parachute in the event of a low-altitude abort -- under 60,000 feet -- during the flights of Project Gemini.

Project Gemini's that part of the space program that will orbit a two-man spacecraft for periods of up to two weeks.

- more -

Add 1
MSC 63-157

The escape system of the Gemini spacecraft uses ejection seats, much like those used in jet fighter planes, that will explode the astronaut from the spacecraft if anything goes wrong during launch. The ejection seats also will be used to escape from the spacecraft if some emergency arises during the descent from the spacecraft.

In an abort or an emergency during descent, the space pilots would come down by individual parachutes.

The dunking device, called a Dilbert Dunker, resembles an aircraft cockpit. It slides down a track, hitting the water at moderate speeds. On contact with the water, the device flips over in a maneuver designed to upset the pilot's equilibrium. This simulates experiences he would encounter in a sinking capsule.

In a parachute drag escape, rapid extraction from the harness is the key to survival.

The Pensacola training was the second of a three-phase program. The first one consisted of parachute land landings at Ellington Air Force Base, Texas, and all 16 astronauts participated.

Each of them wore flight suits, crash helmets and jump boots. They were strapped into a parachute harness. The shroud cords of the parachute were stretched out on the ground behind them. A 600-foot long rope was attached to the front of the harness. The rope was pulled by a pickup truck to tow the space pilot.

Add 2
MSC 63-157

Two men from Center's training branch held the shroud lines as the canopy of the parachute inflated. As the truck moved forward, the astronaut began double timing until he was airborne. This usually took about a half dozen steps.

The astronauts were towed to an altitude of about 400 feet at a speed of about 30 miles an hour. Then they were cut loose and gently floated to earth.

Parachute water landings, the next phase of training, will be learned in Galveston Bay. The astronauts will be towed by power boat. For these landings, they will be wearing their Gemini prototype suits and be carrying their personal equipment.

In the training program, the astronauts use a new parachute called a para-commander. It has a glide capability and is used by many parachute jumping clubs.

dg

Astronaut Thomas P. Stafford gets last minute instructions from Jack Martin (right) in preparation for a ride on the Dilbert Dunker. The dunking device "plops" pilots into the water and flips them over as part of an experiment to disturb their equilibrium. Stafford and eight other astronauts recently went through water survival techniques at the School of Water Safety, U. S. Naval Air Station, Pensacola, Florida.

Astronaut James Lovell, Jr. breaks water during a parachute drag escape experiment September 24 at the School of Water Safety, U. S. Naval Air Station, Pensacola, Florida.

Lovell was one of nine astronauts who took the course as part of their Gemini parachute training.



Astronaut Thomas P. Stafford gets last minute instructions from Jack Martin (right) in preparation for a ride on the Dilbert Dunker. The dunking device "plops" pilots into the water and flips them over as part of an experiment to disturb their equilibrium. Stafford and eight other astronauts recently went through water survival techniques at the School of Water Safety, U. S. Naval Air Station, Pensacola, Florida.



NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNEDED SPACECRAFT
CENTER



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-159
October 1, 1963

HOUSTON, TEXAS -- A definitive research and development contract for the paraglider, one of two landing systems being developed for the Gemini spacecraft, has been awarded to the Space and Information Systems Division of North American Aviation, Inc., by NASA's Manned Spacecraft Center.

The contract sets the cost of the research and development at \$20,015,100, of which 10.8 million dollars has been expended under a letter contract issued about a year ago. The definitive contract runs through April 1964.

This landing system is being developed to provide capability for the Gemini pilots to land a spacecraft at a pre-selected site.

Under a parallel development program, a parachute system is being developed similar to the Mercury landing system, which will provide water landing capability. Both systems have capability beyond their basic designs for either water or land landings.

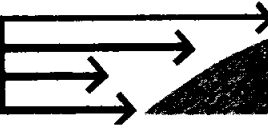
The main parachute system, already in test phase, is being developed by Northrop-Ventura under a \$2,000,000 subcontract to McDonnell Aircraft Corporation, prime contract for the Gemini spacecraft.

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNNED SPACECRAFT
CENTER

NASA



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-160
October 4, 1963

HOUSTON, TEXAS -- The first flight-rated Gemini spacecraft was received this afternoon at Cape Canaveral, Florida, by officials of the NASA Manned Spacecraft Center.

The first two-man Gemini spacecraft, designed to ultimately remain in orbit up to two weeks and to rendezvous with another vehicle in orbit, was transported by an Air Force C-133 cargo plane from the McDonnell Aircraft ramp at the Lambert-St. Louis Municipal Airport to Cape Canaveral.

Spacecraft No. 1 will be used in an unmanned orbital flight from Cape Canaveral which is tentatively scheduled by NASA for early next year. This initial flight will test the structural integrity of the spacecraft and its compatibility with the Titan II, the Gemini launch vehicle. Recovery of the spacecraft is not planned.

The spacecraft delivered today is the first of 13 flight-rated Gemini vehicles to be delivered under a \$456 million NASA contract with McDonnell. Twelve are to be used for space flight and one will initially be used for ground testing.

The Gemini spacecraft is similar in shape to Mercury, but in order to accommodate two astronauts, it is about 20 per cent larger in linear dimension, weighs approximately twice as much and has 50 per cent more cabin volume. In addition, Gemini has an attached equipment section in which will be carried the additional oxygen, electrical power and fuel required for long duration flights. This easily accessible equipment section, which is separate from the reentry body, provides great flexibility for

Add 1
MSC 63-160

alternate missions.

Gemini, which is described as having the potential to become "the workhorse in space", is designed to be more operational than the Mercury spacecraft, which was a research and development vehicle. Most of the flight systems and major components will be readily accessible in compact modules from the outside, an arrangement which should reduce maintenance and drastically cut checkout time immediately prior to launch. During the latter phase of the NASA program, the spacecraft will make controlled landings on earth by means of a paraglider which will be operated by the astronauts.

Delivery of the spacecraft was accomplished 23 months after NASA announced that McDonnell had been selected to negotiate on the two-man spacecraft. The overall Gemini program is under the technical direction of the NASA Manned Spacecraft Center, Houston, Texas.

###

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNE SPACECRAFT CENTER    Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-161
October 7, 1963

HOUSTON, TEXAS -- Avco Corporation Spaceflight Programs Office of Tulsa, Oklahoma has been selected by the NASA Manned Spacecraft Center to build an environmental chamber for testing non metallic materials for use in space.

The contract for the chamber and associated equipment is \$72,970.

Outside dimensions of the chamber are 14 inches wide by 24 inches high by 14 inches deep. Chamber temperatures will range from minus 300 degrees Fahrenheit to plus 600 degrees. Liquid nitrogen will be used for cooling and tungsten elements will be applied for heating.

The chamber will be used in connection with a tensile testing machine for evaluation of physical properties of textiles, plastics and elastomeric materials (synthetic rubber).

In addition to manufacturing the chamber, Avco Corporation will supply the vacuum pumping, cooling and control systems.

The contract call for delivery, installation and checkout of the test chamber within 139 calender days. It will be installed in the Life Systems Laboratory at the Clear Lake site for MSC's Crew Systems Division.

Avco was selected from among seven companies submitting proposals.

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT CENTER  Houston
CENTER Houston, Texas

Walnut 8-2811
Extension 3751

MSC 63-162
October 8, 1963

Houston,
HOUSTON, TEXAS -- The Edward Manufacturing Company, 2510 Broad Street, /has been selected by the NASA Manned Spacecraft Center to build an Apollo recovery davit assembly to be used on the landing craft Retriever to recover full size Apollo command modules from the water.

Contract for the davit assembly is \$10,125.00 and delivery is called for by October 10.

The davit, which is a part of an Apollo retrieval system, consists of a 12-foot, 6-inch ring mounted on a yoke. This in turn is connected to a lifting devise which measures 24 feet long, 23 feet wide and stands 18 feet high.

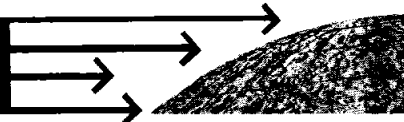
The assembly is built for MSC's Flight Operations Division.

dg

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNNED SPACECRAFT
CENTER



Houston
1, Texas

WAlnut 8-2811
Extension 3751

MSC 63-163
October 8, 1963

HOUSTON, TEXAS - - - The National Aeronautics and Space Administration today named Dr. Joseph F. Shea to head its Apollo Spacecraft development effort at its Manned Spacecraft Center at Houston, Texas.

Dr. Shea, Deputy Director (Systems), in NASA's Office of Manned Space Flight since March 1963, was named to position of Program Manager, Apollo Spacecraft. He will have responsibility for the development of the Apollo Command and Service Module, as well as for the Lunar Excursion Module. Robert O. Piland will continue in his present position as Deputy Program Manager, Apollo Spacecraft. For the past few months, Piland also has served as Acting Program Manager.

Dr. Robert R. Gilruth, Director of the Manned Spacecraft Center, said, "I am delighted to have a man of Dr. Shea's outstanding background and high caliber performance join us here in Houston." James C. Elms, Dr. Gilruth's Deputy Director for Development and Programs, who had

previously been associated with Dr. Shea on a ballistic missile program, stated, "The development of the Apollo spacecraft is the most challenging task facing this center. I am most happy that Joe Shea is joining our organization to take over this assignment."

George M. Low, Deputy Director (Programs) in the Office of Manned Space Flight, will assume the added responsibility for the Systems organization.

Before joining NASA, in early 1962, Dr. Shea was Space Program Director at Space Technology Laboratories, Los Angeles, California. From 1959 to mid-1961, Dr. Shea served as Director of the Advanced System Research and Development Division, and Manager of the Titan Inertial Guidance program with AC Sparkplug Division of General Motors, Milwaukee, Wisconsin. Previously, he was employed by Bell Telephone Laboratories, Whippany, New Jersey, where he was a principal contributor to the development of the Titan I guidance system. He also served as an instructor in engineering mechanics at the University of Michigan.

Dr. Shea was born in New York City on September 5, 1926. He attended the University of Michigan, receiving his Bachelor of Science degree in mathematics in 1949, his Master of Science degree

in engineering mechanics in 1950, and Doctor of Philosophy degree in engineering mechanics in 1955. From 1944 - 1947, he served in the U. S. Navy with the rank of Ensign.

He is a member of the American Institute of Aeronautics and Astronautics, and the Institute of Electronics and Electrical Engineering.

Dr. Shea is married to the former Beverly Price. They have five daughters.

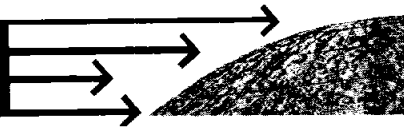
###

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT
CENTER

NASA



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-164
October 4, 1963

HOUSTON, TEXAS -- Faith 7, the Mercury spacecraft flown by Astronaut Leroy Gordon Cooper in his earth circling 22 orbit flight will be on display October 10-13 at Little Rock.

The four day stop in Little Rock is the second of 50 state capitol visits that NASA has scheduled for Cooper's spacecraft. Close to 1,000,000 persons have already seen the spacecraft since it began this cross country tour in Cooper's home-state of Oklahoma.

Faith 7, its outer metal skin scorched from the searing heat of reentry, will be on display in the Arkansas State Capitol Building. Mr. Kelly Bryant, Arkansas Secretary of State, said the spacecraft may be viewed by the public from 10:00 a. m. to 10:00 p. m. on Thursday, Friday, Saturday, and Sunday.

The NASA Manned Spacecraft Center at Houston, Texas, has set Faith 7 on a stand which permits easy viewing of the inside of the spacecraft. A section of the base of the heat shield and portions of the outer skin have been cut away permitting the first public look at the inner structure of a Mercury spacecraft.

- more -

Add 1

LC 63-164

The spacecraft - inside and out - is exactly as it was when it splashed down into the Pacific near Midway Island on May 16, 1963. Nothing has been changed. The spacecraft shingles - its outer skin made of a new metal rene' 41 - shows the effects of the 1,000 degree heat which blanketed the spacecraft during re-entry into earth's atmosphere. The heat shield - a mixture of glass fibers and resin - at the base of the spacecraft withstood maximum temperatures of 3,000 degrees farenheit when Cooper directed Faith 7 on its return to earth.

Also on display with the spacecraft are the cameras Cooper carried and the astronaut Survival Kit which rode on Faith 7's 546,185 mile earth-circling flight. Samples of the food Cooper ate during his day and a half in space will also be on display.

Faith 7, which flew around the earth at more than 17,500 miles per hour, will roll into Little Rock on a tractor-trailer rig. The specially designed frame on which the spacecraft is secured will be rolled off the truck and placed in the state capit ol building.

The 13 month tour, ending in the nation's capit ol on November 1, 1964, will cover approximately 20,000 miles, a distance Faith 7 covered in space in approximately 80 minutes.

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT
CENTER

NASA



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-165
October 10, 1963

HOUSTON, TEXAS -- The Space and Information Systems Division of North American Aviation, Inc., Downey, California, has been awarded a \$100,000 contract by the NASA Manned Spacecraft Center to study modifications to the Apollo spacecraft that will permit it to perform as a space sciences laboratory for missions up to a year.

Project Apollo is the space program designed to land two men on the moon and return them safely to earth. The modifications, for which the study contract has been let, will adapt the spacecraft for long earth orbital missions.

North American has been asked to supply MSC with studies covering both a single spacecraft on a 100-day mission and three or four spacecraft used consecutively on a one year mission.

The major objectives of the flights will be to determine man's requirements for protracted space missions. This will require continuous evaluation of his physiological condition and capabilities to work in space under the zero gravity environment and under artificial "g" force -- if it can be provided.

The study calls for investigation of possible uses of both the Service module and Command module as crew quarters. The Apollo craft is now designed for a crew of three. In addition to the Command and Service modules mentioned, there is a Lunar Excursion module. (LEM)

During the trip to the moon LEM will take two of the three members to the surface of the moon. It will be left in lunar orbit on the return trip to earth. The Service module likewise will be jettisoned prior to earth reentry.

Since LEM is not needed in earth orbital missions, the area it now takes up would be used by a laboratory module to provide additional work space during the longer missions of the modified Apollo craft.

MSC has asked that the modified Command module be capable of performing an abort mission for safe recovery of the crew; be capable of landing either on land or in the water; offer maximum crew protection against radiation and meteoroid hazard and provide a safe and comfortable space environment for the crew for the entire mission.

Size of the crew also is to be determined during this study.

The contractor must look into the possibility of providing an artificial gravity system and he will study rendezvous and docking methods using two modified Apollo spacecraft.

The Apollo craft will be lifted into earth orbit by a Saturn 1-B booster.

North American was notified of the contract award on August 1 and the definitive contract was signed September 17. The study is to be completed by the first of November with the final report due within 30 days of that date. It is a fixed price research and development type of contract. dg

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT CENTER



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-166
October 9, 1963

HOUSTON, TEXAS -- Approximately 80 persons assigned to the NASA Manned Spacecraft Center's Logistics Division moved into new offices today at the Clear Lake site.

The group is the first large complement of MSC employees to occupy the new quarters. They are housed in the Center Support Office building and the Warehouse and Shops building.

The division includes transportation and supply personnel which formerly occupied office space at Ellington Air Force Base.

Next move will be made by some 100 persons assigned to the Computation and Data Reduction Division currently occupying offices at the University of Houston. They are expected to move into the Central Data Office in December.

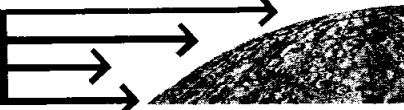
The major move from the 14 temporary offices in Houston will take place between February 28 and March 23, 1964. At that time, over 2,000 employees, equipment, furniture and office supplies will be relocated. MSC will completely occupy the Clear Lake facility by July 1, 1964.

dg

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT
CENTER



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-167
October 10, 1963

HOUSTON, TEXAS -- Faith 7, the Mercury spacecraft flown by Astronaut L. Gordon Cooper in his earth circling 22 orbit flight last May will be on display October 17 through 20 in Jefferson City, Missouri.

The four day stop in Jefferson City is the third of 50 state capitol visits that the National Aeronautics and Space Administration has scheduled for Cooper's spacecraft. Close to 1,000,000 persons have already seen the spacecraft since it began its cross country tour in Cooper's home state of Oklahoma.

Faith 7, its outer metal skin scorched from the searing heat of re-entry, will be on display in the Missouri State Capitol building. Richard Dunn, assistant superintendent of public buildings, said the spacecraft may be viewed by the public from 10:00 a. m. to 10:00 p. m. on Thursday, Friday and Saturday and from 1 p. m. to 10:00 p. m. on Sunday.

The NASA Manned Spacecraft Center at Houston, Texas, has set Faith 7 on a stand which permits easy viewing of the inside of the spacecraft. A section of the base of the heat shield and portions of the outer skin have been cut away permitting the first public look at the inner structure of a Mercury spacecraft.

Add 1
MSC 63-164

The spacecraft - inside and out - is exactly as it was when it splashed down in to the Pacific near Midway Island on May 16, 1963. Nothing has been changed. The spacecraft shingles - its outer skin made of a new metal rene' 41 - shows the effects of the 1,000 degree heat which blanketed the spacecraft during reentry into earth's atmosphere. The heat shield - a mixture of glass fibers and resin - at the base of the spacecraft withstood maximum temperatures of 3,000 degrees farenheit when Cooper directed Faith 7 on its return to earth.

Also on display with the spacecraft are the cameras Cooper carried and the astronaut Survival Kit which rode on Faith 7's 546,185 mile earth-circling flight. Samples of the food Cooper ate during his day and a half in space will also be on display.

Faith 7, which flew around the earth at more than 17,500 miles per hour, will roll into Little Rock on a tractor-trailer rig. The specially designed frame on which the spacecraft is secured will be rolled off the truck and placed in the state capitol building.

The 13 month tour, ending in the nation's capitol on November 1, 1964, will cover approximately 20,000 miles, a distance Faith 7 covered in space in approximately 80 minutes.

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANAGED SPACECRAFT
CENTER



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-168
October 11, 1963

HOUSTON, TEXAS -- American Gyros, a division of Tamar Electronics, Inc., of Los Angeles, California has been awarded a \$100,000 development and production contract for work on the guidance systems of Little Joe II -- a booster for the NASA Manned Spacecraft Center's Apollo test program.

The guidance system will include the electronics instruments for control signals for providing roll, pitch and yaw information of the vehicle's control system. Guidance will include improved gyroscopes used recently on military missiles.

The systems will undergo testing soon at the company plant, according to an official of American Gyros.

Tamar Electronics Inc. is one of a number of sub-contractors who are assisting in the development of the Little Joe II booster for the prime contractor, General Dynamics/Convair of San Diego, California.

dg

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT CENTER  **Houston**
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-169
October 25, 1963

HOUSTON, TEXAS -- Donald T. Gregory, Technical Assistant to the Director of the NASA Manned Spacecraft Center, will be the principal speaker at ceremonies on November 1 commemorating the 20 year history of the 15th Air Force at Malmstrom Air Force Base, Montana.

Gregory's speech, entitled "Progress of the U. S. Manned Space Flight Program," will emphasize advances in the Project Apollo program. Apollo is this nation's effort to send an astronaut team to the moon and return them safely to earth.

Gregory joined the National Aeronautics and Space Administration in 1959 and was assigned to the Langley Research Center in Virginia where he worked on aerodynamics stability and wind tunnel studies on supersonic aircraft. He came to Houston as part of the transfer of the space Center from Virginia to Texas.

Gregory was born in Cleveland, Ohio in 1933. He earned his degree in mechanical engineering at the University of Miami in Florida in 1955. Soon after graduation he entered the Air Force where for three years he was assigned to engineering and aeronautical duties. He was honorably discharged as a first lieutenant.

Gregory is married and the father of three children.

dg

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT
CENTER

NASA

Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-170
October 11, 1963

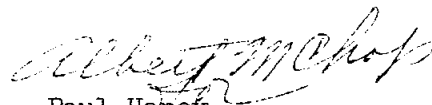
Note to Editors:

Manned Spacecraft Center's Public Affairs Office has established a News Bureau, combining the functions of three PAO branches into a single cohesive unit.

Ben Gillespie has been named Chief of the News Bureau, which will incorporate personnel and functions of the News Media Communications Branch; the Industrial Communications Branch and the Internal Communications Branch. These three branches have been dissolved.

The reorganization, effective October 14, 1963, is an effort to increase the speed, efficiency and effectiveness of transmittal of information to the public via news media channels about manned space flight development and operations programs assigned to Manned Spacecraft Center.

The News Bureau is located on the second floor of the Peachey Building, 5113 Griggs Road, Houston, Texas, and may be reached by telephone at Walnut 8-2811, extensions 3751-53, 3781-83 and 3571-54.


Paul Haney
Public Affairs Officer

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT
CENTER

NASA



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-171
October 16, 1963

HOUSTON, TEXAS -- Texas Instruments, Inc. of Dallas has been awarded a \$194,600.00 contract by the NASA Manned Spacecraft Center to study the best methods of gathering scientific information and lunar samples once the Apollo space team lands on the moon.

Major objective of the study include measurements which will add to the success of future Apollo and other missions and measurements which will contribute to the fundamental knowledge of the moon.

The study is to be completed by May 30, 1964 and out of it will come the optimum methods for planning lunar scientific exploration once the Apollo flight missions are undertaken.

In the study, Texas Instruments was asked to define methods of determining lunar surface temperature, topography, bearing strength of the moon's surface, temperature, geological formation, chronological age, mineral content and search for water. For the purpose of the study certain flight mission criteria have been assumed.

- more -

The study asked for plans for two Apollo flights each of four hours working time on the moon. Only one astronaut will be outside the spacecraft at any given time, during these two proposed flights. The study also will cover flights with expected stay times up to one week on the lunar surface and the possibility that both astronauts may be out of the LEM at the same time.

The scientific payload will weigh at least 215 pounds. It is planned to be carried in an area outside the environmental quarters of the LEM and will be exposed to space flight hazards for periods up to a week. The payload must be capable of withstanding extremes in temperature and the shock of launch and landing.

When the space pilots depart from the moon, the study calls for them to leave measuring instruments that will send information to earth for periods up to six months. These instruments will have self-contained power and telemetry transmission equipment.

Emphasizing the importance MSC attaches to lunar surface characteristics, the study calls for an analysis of:

- a. methods of obtaining and preserving geologic samples,
- b. methods of determining properties of lunar sub-surface materials,
- c. methods of identifying samples,
- d. methods of performing sample analysis on the moon's surface, and
- e. methods of identifying the lunar surface area from where extraction of samples have been made.

Add 2

SC 63-171

The Apollo lunar program is designed to land an astronaut team on the moon and return them to earth. Space flight hardware consists of three major items: the Command Module, the Service Module and the Lunar Excursion Module.

The Command Module will carry three space pilots to the vicinity of the moon. The Service Module will contain the propulsion system and equipment to support the Command Module.

As the spacecraft approaches the moon, two of the Apollo team members will enter the LEM, detach themselves from the craft and descend in the LEM to the moon for surface exploration.

Upon completion of scientific studies, the crewmen will blast off from the lunar surface with the samples, rendezvous with the Command Module, transfer from the LEM and return to earth.

The Texas Instruments contract is a fixed-price type. Eighty-two aerospace companies were solicited by MSC and 17 responded with proposals.

The study is being made for MSC's Space Environment ~~Development~~ Division.

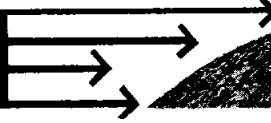
dg

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT
CENTER

NASA



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-173
October 17, 1963

HOUSTON, TEXAS -- Sightings of ground objects such as those observed by Astronaut Gordon Cooper during his 22-orbit flight last May are not impossible if atmospheric conditions are ideal and the observer is highly experienced in making high altitude observations.

This was the report from Dr. S. Q. Duntley and Dr. John H. Taylor of the University of California's Visibility Laboratory, San Diego, in a study made for the NASA Manned Spacecraft Center. This study was initiated as a result of the controversy caused by the statements of some scientists that Astronaut Cooper could not have seen what he claimed to have seen.

"It must be emphasized that the visibility calculations described in this study do not constitute proof that Major Cooper actually saw what he reported. They do, however, show that such sightings are not impossible by an observer at orbital altitude if his visual capabilities are like those which we believe Major

- more -

Add 1
4SC 63-173

Cooper possesses, and if the atmospheric conditions and target properties are like those we have assumed in making the calculations," according to Dr. Duntley, Director of the Visibility Laboratory.

There has been controversy over the claims by Astronaut Cooper in which he reported seeing roads, vehicles, buildings and smoke during his flight. The Visibility Laboratory study is a report on the results of these calculations using visual data in the field and in the laboratory.

"We are talking only of the probabilities that an observer who fixates accurately upon an area containing a target will see that target," Duntley said. "This, we believe, is the proper datum in this instance because, in each case some highly visible mark, such as a road, aided Major Cooper in finding the objects he reported."

Cooper said he saw a dust cloud presumably caused by a vehicle traveling on a dirt road paralleling the U.S. - Mexican border in the desert near El Centro, California. His observation was from an altitude of 86 nautical miles. Cooper stated that conditions at the surface of the earth appeared to be windless and that he could discern a light dot at the eastern end of the dust cloud.

"Calculation shows that the vehicle plus the dust cloud behind it is more visible than the road itself. It is possible, moreover, that the appearance of the dust cloud would create the impression of having a lighter tip at its eastern end," the report said. "There is reason to believe, therefore, that the presence of a moving Border Patrol vehicle on the dirt road near El Centro

could have been seen from orbital altitude under the atmospheric and lighting conditions which we believe to have prevailed at the time of Major Cooper's observation. "

Astronaut Cooper also reported a dust cloud presumably caused by a vehicle traveling on a dirt road on a high Tibetan plain. He observed a light spot at the intersection of the dust cloud and the road.

From data on the area selected from files, the Visibility Laboratory concluded that there is significant possibility that Cooper correctly reported the presence of a moving vehicle.

In the same general area, Cooper said he saw what he believed to be buildings with smoke issuing from them. The report stated that lighting conditions which prevailed at the time of Astronaut Cooper's observations were such that the sides of the house should have been brightly lit and these areas should have formed high contrast with the terrain.

"Using terrain reflectance data which we believe to be applicable to Tibet, we have found that if a brightly lighted building site had a projected area of 138 square feet in the direction in which Major Cooper was looking, it could have produced an optical signal capable of being visually detected, " the report said.

In the case of the smoke, it was stated that ground wind carried the smoke horizontally across the countryside. A long streak of gray smoke could have been seen, even if it were only two feet wide and a wider streak of smoke would have produced a higher probability of being seen.

Cooper also said he saw a train track. He said he observed an interruption in the track with a trail of white smoke issuing from its northeastern end. This he interpreted to be the train. Cooper said that the train track was darker than the terrain.

"The long dark streak across the countryside should have been visually detectable," Dr. Duntley wrote, "and the streak of white smoke should have been even more visible."

In conclusion, Dr. Duntley emphasized that the calculations reported "are based upon assumption concerning the target, the background, and the atmospheric conditions which we believe to have prevailed on the occasions when Major Cooper reported seeing the objects. There is no way of proving that these conditions did, in fact, prevail but it can be stated that if they did exist, then the visual sighting of these objects by an astronaut as capable as Major Cooper from an orbital altitude of 86 nautical miles have a finite probability."

NASA

S-63-6445



NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT CENTER    **Houston**
1, Texas

WAlnut 8-2811
Extension 3751

MSC 63-174
October 16, 1963

NOTE TO EDITORS:

HOUSTON TEXAS -- This is to advise you that NASA plans to introduce a contingent of new astronauts at 3:00 pm Friday, October 18, 1963, in Cullen Auditorium, University of Houston, 3801 Cullen Boulevard, Houston, Texas.

Background material on the new men will be available Friday afternoon.

###

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT CENTER  Houston
1, Texas

Walnut 8-2811

MSC 63-175
October 18, 1963

HOUSTON, TEXAS -- NASA announced today that it will negotiate with Massachusetts Institute of Technology, AC Spark Plug Division of General Motors Corporation, Raytheon Company, Kollsman Instrument Corporation and Sperry Gyroscope Company to develop, fabricate and test the Guidance and Navigation System for the Lunar Excursion Module (LEM) of the Apollo spacecraft.

These organizations are presently engaged in development and fabrication of the Guidance and Navigation System for the Apollo Command and Service Modules under contract to NASA's Manned Spacecraft Center at Houston, Texas.

Estimated cost of the total work to be performed by the five contractors is expected to exceed \$60,000,000. The Manned Spacecraft Center will also have management responsibility of contracts for the LEM work.

The technical approach which is to be followed in the development of the LEM Guidance and Navigation System will insofar as possible be identical to the Command and Service Module system. As many parts,

- more -

Components and subsystems as possible will be directly interchangeable between the two systems. This approach will improve overall reliability and allow the astronauts to fly with one type of system as opposed to a different system for each module.

The contractors will provide the following:

AC Spark Plug, Milwaukee, Wisconsin -- Inertial Measuring Unit, including its precision gyroscopes, navigation base, power and servo assembly, and the coupling display unit. In addition, AC Spark Plug will assemble and test the complete system.

Kollsman Instruments, Syosset, Long Island, New York -- Scanning telescope, map and visual display unit.

Raytheon Missile and Space Division, Sudbury, Massachusetts -- Onboard computer.

Sperry Gyroscope, Great Neck, Long Island, New York -- Pulse integrating pendulum accelerometer.

Each participating contractor will design, fabricate, test and support the necessary ground support equipment for that portion of the system which it furnishes.

The Instrumentation Laboratory of MIT, Cambridge, Massachusetts, will direct overall development of the system.

The Grumman Aircraft Engineering Corporation, Bethpage, Long Island, New York, manufacturing the Lunar Excursion Module, is responsible for integrating the system into the LEM.

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNNED SPACECRAFT
CENTER



Houston
1, Texas

WAlnut 8-2811
Extension 3751

MSC 63 - 176
October 22, 1963

HOUSTON, TEXAS -- Faith 7, Mercury spacecraft flown by Astronaut L. Gordon Cooper in his earth circling 22 orbit flight last May will be on display October 31 through November 3 in Indianapolis, Indiana.

The four day stop in Indianapolis is the fifth of 50 state capitol visits at the National Aeronautics and Space Administration has scheduled for Cooper's spacecraft. Close to 1,050,000 persons have already seen the spacecraft since it began its cross country tour in Cooper's home state of Oklahoma.

The NASA Manned Spacecraft Center at Houston, Texas, has set Faith 7 on a stand which permits easy viewing of the inside of the spacecraft. A section of the base of the heat shield and portions of the outer skin have been cut away permitting the first public look at the inner structure of a Mercury spacecraft.

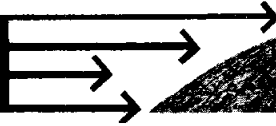
The spacecraft - inside and out - is exactly as it was when it splashed down into the Pacific near Midway Island on May 16, 1963. Nothing has been changed. The spacecraft shingles - its outer skin made of a new metal rene' 41 - shows the effects of the 1,000 degree heat which blanketed the spacecraft during

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT
CENTER

NASA



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-177
October 23, 1963

HOUSTON, TEXAS -- Hamilton Standard Division of United Aircraft Corporation of Windsor Locks, Connecticut has been awarded a \$68,717.00 contract by the NASA Manned Spacecraft Center to study and recommend a one-man rocket powered device for movement in space and on the surface of the moon.

Major objectives of the study and design contract are to make it possible for a space pilot in a pressure suit to travel over portions of the moon that are not accessible on foot, and to maneuver outside of his spacecraft if necessary.

In space, the system would propel and guide the astronaut when he leaves the spacecraft to perform maintenance tasks or to transfer from one space vehicle to another.

The study is to be completed by April 30, 1964 and from it will come a recommendation for a preliminary design for the one-man system.

For purposes of the study, a lunar operational mission has been

assumed as follows:

- more -

Add 1
MSC 63-177

a. the space pilot will use the propulsion device for moving over rough terrain where walking would be difficult or where an exploration vehicle could not function.

b. the unit is to be used for scaling steep slopes such as lunar craters.

c. the space pilot might want to glide over smooth areas to increase his operational radius from the Lunar Excursion Module (LEM).

The study asks for performance capabilities which will allow the astronaut to rise and descend vertically, boost himself into a controlled trajectory in any direction, hover and rotate. The study also calls for capability to perform rescue missions.

Hamilton Standard was requested to investigate methods which will permit the one-man rocket to operate under zero gravity conditions and in a vacuum.

All controls will be manually operated. They should be simple and reliable and, if possible, be manipulated with but one hand. It is most important to exploit the astronaut's operational capability to the maximum, MSC engineers say; therefore, they are asking that the design of the unit be an extension of existing equipment and techniques.

The one-man rocket will be required to operate in temperatures ranging from minus 280 degrees fahrenheit to a plus 260 degrees, in an gravitational field one-sixth that of the earth and in space where the gravitational field is negligible.

- more -

Add 2
MSC 63-177

The unit will include an automatic control for stabilizing the space pilot during flight. An astronaut would utilize the locomotive unit along with a pressurized suit and portable life support system designed to keep him alive in the environments of the moon and space.

As one of the main objectives of the study, Hamilton Standard will determine whether one dual purpose system or two separate systems should be designed for lunar and space maneuvering.

The device will be subjected to cosmic radiation, high solar energy particles, radioactivity emanating from the lunar surface and meteoroid hazards.

When not in use, the system will be stored on board the space vehicle.

The Hamilton Standard contract is a fixed price research and development type. The work must be completed within six months, and the company will have an additional month for preparation of the final report.

Sixty-nine aerospace companies were solicited by MSC and six responded. The study is being made for MSC's Spacecraft Technology Division.

In addition to the one man rocket propulsion device study, Hamilton Standard is prime contractor responsible for the development of the space suit and portable life support systems for the Project Apollo lunar landing program.

dg

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT CENTER    Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-178
October 22, 1963

HOUSTON, TEXAS -- A full-scale unmanned boilerplate model of the Apollo spacecraft was recovered successfully October 22, 1963 at El Centro, California after air drop designed to demonstrate the parachute system operation under low altitude abort conditions.

Conducted at the joint U. S. Naval-Air Force Parachute Facility, this was the 8th test of the 3 parachute cluster Apollo landing system developed by the Ventura Division of Northrop for the Apollo principal contractor North American Aviation Space and Information Systems Division and the National Aeronautics and Space Administration.

In today's test the Apollo boilerplate command module was dropped from an Air Force C-133 transport flying at 13,000 feet. A brake chute deployed by a static line, inverted and stabilized the vehicle in a apex forward attitude.

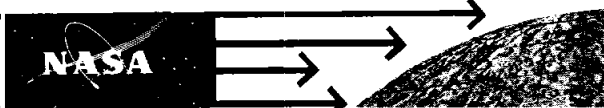
After the brake chute disconnected, the main landing system sequence was initiated. This included a mortar deployment of a drogue parachute to stabilize the vehicle in its proper descent position. A subsequent mortar deployment of three pilot chutes which extracted the three main ring sail parachutes which lowered the vehicle at approximately 25 feet per second to impact.

Officials viewing the test said all systems appeared to function normally.

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT
CENTER



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-179
October 22, 1963

HOUSTON, TEXAS -- Dr. George E. Mueller, Associate Administrator for Manned Space Flight, NASA, today named Dr. Walter C. Williams to be Operations Director for all manned space flight missions.

Effective November 1, Williams, now Deputy Director of Manned Spacecraft Center for Mission Requirements and Flight Operations at Houston, Texas, will become Deputy Associate Administrator for Manned Space Flight Operations in NASA Headquarters, Washington, D. C.

Dr. Williams will supervise operations on manned space flight missions at the Manned Spacecraft Center, Marshall Space Flight Center, and Launch Operations Center. During manned space flight missions, he will have full authority and responsibility for conduct of the flights. All NASA-DOD and other teams participating in the operation will report to him for direction.

Dr. Mueller said "because of the increasing complexity of NASA's manned space flight projects, we must have a key man to direct the operations of the many organizations and installations located throughout the United States and the World that contribute to the conduct of a flight mission. We are indeed fortunate to be able to rely on the unique experience of Dr. Williams in Project Mercury for the more challenging tasks ahead in Gemini and Apollo."

Add 1
MSC 63-179

Mr. James C. Elms, Deputy Director of Manned Spacecraft Center, will assume full responsibility for the general management of Manned Spacecraft Center activities under Dr. Robert R. Gilruth, Director of the Center.

Dr. Williams has 23 years of flight engineering experience with the NACA and NASA. For the past 16 years he has managed the operational phases of advanced research type aerospace projects, including the X-15 aircraft and Project Mercury. During this time, he made many outstanding contributions in the field of high-speed flight research and was awarded the NASA Distinguished Service Medal for his outstanding technical leadership as Director of Operations for Project Mercury.

Dr. Williams is a native of New Orleans, La. He received a B. S. degree in aeronautical engineering from Louisiana State University, Baton Rouge, in 1939, and an honorary doctorate degree for engineering from his alma mater in June 1963.

Dr. Williams is married to the former Helen Manning of New Orleans, La. They have three children -- Charles Manning, born November 26, 1942, a business major and pre-law student at the University of Houston; Howard Lee, born October 3, 1948, and Elizabeth Ann, born September 12, 1952.

Because Dr. Williams will continue to have major duties in the Houston area as well as in Washington and Cape Canaveral, he will continue to make his home in Houston.

Add 2
MSC 63-179

* * *

Announcement of the assignment of Dr. Walter C. Williams to the post of Deputy Associate Administrator for Manned Space Flight Operations under Dr. George E. Mueller, NASA Associate Administrator for Manned Space Flight, is the latest in a series of reassignments in the manned space flight program.

James C. Elms, Deputy Director of MSC, will assume full responsibility for general management of the Manned Spacecraft Center activities under Dr. Robert R. Gilruth, Director of the Center.

A reorganization of MSC has been under study for some time. It is planned to realign the Center to obtain maximum direct input from Engineering, Mission Control and the Astronaut Flight Crews into the Gemini and Apollo programs and to deploy the full strength of the Mercury team into these projects. Key elements such as the Integrated Mission Control Center, the Preflight Operations Group at Cape Canaveral, and the astronauts and crew training groups will continue to give maximum support to the spacecraft development while readying themselves for their key role as part of the operations team during the actual manned flight missions.

###

Houston, Texas, October 18, 1963 - The National Aeronautics and Space Administration introduced 14 new astronauts at a news conference here today, bringing to 30 the total assigned to Manned Spacecraft Center programs.

The new group of astronauts is composed of seven volunteers from the Air Force, four from the Navy, one from the Marine Corps, and two civilians. They are, from the Air Force: Maj. Edwin E. Aldrin Jr., 33, assigned at Houston, Tex.; Capts. William A. Anders, 30, and Donn F. Eisele, 33, both assigned to Kirtland AFB, N. Mex.; and Capts. Charles A. Bassett II, 31; Theodore C. Freeman, 33; David R. Scott, 31; and Michael Collins, 32, all assigned at Edwards AFB, Calif.

The Navy volunteers are: Lt. Cmdr. Richard F. Gordon Jr., 34, and Lt. Eugene A. Cernan, 29, both assigned at Monterey, Calif.; Lt. Alan L. Bean, 31, Cecil Field, Fla.; and Lt. Roger B. Chaffee, 28, Wright-Patterson AFB, Ohio.

The Marine is Capt. Clifton C. Williams Jr., 31, of Quantico, Va.

The two civilians are R. Walter Cunningham, 31, a research scientist for Rand Corporation at Van Nuys, Calif.; and Russell L. Schweickart, 27, a research scientist from Lexington, Mass., who works at Massachusetts Institute of Technology, Cambridge, Mass. All are married except Captain Williams, NASA's first bachelor astronaut.

The group was selected from a total of approximately 500 volunteers from the military and 225 civilian applicants.

The selection today was the third such announcement since America's manned space flight program was started in October 1958. The seven Project Mercury astronauts were named in April 1959 and nine more were selected in

September 1962. Those named today will report for duty and start their training early in 1964, according to Astronaut Donald K. "Deke" Slayton, coordinator of astronaut activities for Manned Spacecraft Center and chairman of the 1963 Astronaut Selection Committee.

NASA presently plans to select another contingent of astronauts, likely to include some scientists, in the Fall of 1965. The National Academy of Science is cooperating with NASA in establishing criteria for selection of astronaut scientists.

The latest astronaut recruitment effort was announced by the NASA June 5 and July 1 was set as the deadline for applications. Since that date, the following actions were taken prior to making the selection.

July 15 - Deadline for the receipt of all papers required of the applicants.

July 17-20 - The selection committee met and selected 34 for detailed evaluation.

July 25 - Medical examinations of those men were started by the School of Aerospace Medicine, Brooks AFB, Tex., under contract from the Manned Spacecraft Center. Working with School of Aerospace Medicine data, MSC medical authorities selected 28 as medically qualified.

Sept. 2-7 - These men were called to Houston for examinations concerning engineering and space sciences, technical interviews and final evaluation.

Selection criteria, as outlined in the June 5 announcement, required that astronaut candidates, in order to qualify, must:

- ... Be a United States citizen
- ... Have been born after June 30, 1929, so as not to have reached his 34th birthday before the deadline for applications.
- ... Be six feet or less in height

- ... Have earned a degree in engineering or physical science
- ... Have acquired 1,000 hours jet pilot time, or have attained experimental flight test status through the Armed Forces, NASA, or the aircraft industry, and
- ... Be recommended by his present organization.

Compared with the 1962 selection criteria, the maximum age was reduced from 34, and certification as a test pilot, while still preferred, was not mandatory.

In order to insure that no qualified person was overlooked in the selection, Manned Spacecraft Center solicited recommendations from the military services, various reserve organizations, industrial aerospace firms, and other organizations such as the Society of Experimental Test Pilots, the Airline Pilots Association and the Federal Aviation Agency.

Following are brief biographical sketches of the new astronauts:

MAJOR EDWIN E. ALDRIN JR. (USAF)

Maj. Edwin E. Aldrin Jr., 206 Confederate Way, El Lago, Texas, was born in Glen Ridge, N. J., January 20, 1930. He is the son of Col. and Mrs. Edwin E. Aldrin (USAF retired), 180 Walnut, Montclair, N. J., currently living at their summer home, 38 First Avenue, Manasquan, N.J. He completed his secondary education at Montclair High School.

Aldrin was graduated third in a class of 475 from the United States Military Academy at West Point, N.Y., in 1951 with a bachelor of science degree, transferred to the Air Force, and received a doctor of science degree in astronautics from the Massachusetts Institute of Technology at Cambridge, Mass., in 1963. His thesis concerned manned orbital rendezvous.

Aldrin is five-feet 10-inches tall, weighs 165 pounds, and has blond hair and blue eyes. He is married to the former Joan Ann Archer, daughter of Mr. and Mrs. Michael Archer, 50 Edgewood, Ho-Ho-Kus, N. J. The Aldrins have three children: James M., 8; Janice Ross, 6; and Andrew John, 5.

Prior to his appointment as an astronaut, Aldrin's last assignment with the Air Force was with the Space Systems Division's Field Office at Manned Spacecraft Center in Houston where he was doing work concerning integrating Department of Defense experiments in the Gemini-Titan II flights. Before that, he served as an engineer in the Gemini Target Division of Space Systems Division with work centered around a study effort performed by Lockheed Aircraft Corporation concerning the maneuver capabilities of the Agena target. He has amassed more than 2,500 hours flying time, including more than 2,200 hours in jet aircraft. On duty in Korea, he was credited with two enemy fighter kills.

(Maj. Edwin E. Aldrin, Jr.)

Aldrin is a member of the American Institute of Aeronautics and Astronautics; Sigma Gamma Tau, aeronautical engineering society; Tau Beta Pi, national engineering society; and Sigma Xi, national science research society.

CAPT. WILLIAM A. ANDERS (USAF)

Capt. William A. Anders, who observed his 30th birthday yesterday, was born in Hong Kong, where his father was based on military duty, October 17, 1933. He lives at 10420 Princess Jeanne NE, Albuquerque, N. Mex. He is the son of Cmdr. and Mrs. Arthur F. Anders (USN retired), 4602 Resmar Dr., La Mesa, California.

Anders was graduated from the U. S. Naval Academy at Annapolis, Md., in 1955 with a bachelor of science degree. On graduation, he was commissioned in the Air Force. He received a master of science degree from the Air Force Institute of Technology at Wright-Patterson AFB, Ohio. He has done additional graduate work at Ohio State University.

He is five-feet eight-inches tall, weighs 150 pounds, and has brown hair and blue eyes. Anders is married to the former Valerie Elizabeth Hoard, daughter of Mr. and Mrs. Henry G. Hoard, 2481 Bonita, Lemon Grove, California. The Anders have four children: Alan Frank, 6; Glen Thomas, 5; Gayle Alison, 3; and Gregory Michael, 1.

His last assignment was as a nuclear engineer - instructor pilot at the Air Force Weapons Laboratory, Kirtland AFB, N. Mex. He had technical management responsibility for space and space reactor radiation shielding and radiation effects programs.

Anders has logged more than 1,800 hours flying time, including almost 1,600 hours in jet aircraft. He is a member of Tau Beta Pi, national engineering society; and the American Nuclear Society.

CAPT. CHARLES A. BASSETT II (USAF)

Capt. Charles A. Bassett II, who lives at 6848 Lindbergh, Edwards, California, was born in Dayton, Ohio, December 30, 1931. His mother, Mrs. Belle James Bassett, lives at 4419 Groveland Royal Oaks, Mich. He received his secondary education at Berea, Ohio.

Bassett attended Ohio State University from 1950 to 1952, and Texas Technological College, Lubbock, Tex., from 1958 to 1960. He received a bachelor of science degree in electrical engineering with high honors from Texas Tech. Since that time he has done graduate work at the University of Southern California. He entered the Air Force in October 1952.

Bassett is five-feet $9\frac{1}{2}$ -inches tall, weighs 160 pounds and has brown hair and brown eyes. He is married to the former Jean Marion Martin, daughter of Mr. and Mrs. Wiley O. Martin of Hesperia, California. The Bassetts have two children: Karen Elizabeth, 6; and Peter Martin, 2.

His last Air Force assignment was as experimental test pilot and engineering test pilot in the Fighter Projects Office at Edwards AFB, Calif. Bassett is a graduate of the Aerospace Research Pilot School and the Air Force Experimental Test Pilot Course.

He has logged almost 2,800 hours flying time, with almost 2,100 hours in jet aircraft included. He is a member of the American Institute of Aeronautics and Astronautics and Phi Kappa Tau.

LT. ALAN L. BEAN (USN)

Lt. Alan L. Bean, 4371 Water Oak Lane, Jacksonville, Florida, was born in Wheeler, Texas, March 15, 1932. His parents, Mr. and Mrs. Arnold H. Bean, live at 3100 Bellaire Drive West, Fort Worth, Texas.

Bean received his high school diploma from Paschal High School in Fort Worth in 1950 and a bachelor of science degree in Aeronautical Engineering from the University of Texas in 1955 and was commissioned in the Navy.

He is five-feet $9\frac{1}{2}$ -inches tall, weighs 150 pounds, and has brown hair and hazel eyes. His wife is the former Sue Ragsdale, daughter of Mr. and Mrs. Edward B. Ragsdale, 6914 Hyde Park Drive, Dallas, Texas. The Beans have two children: Clay Arnold, 7; and Amy Sue, born this year.

Bean's last Navy assignment was with Attack Squadron 44 at Cecil Field, Florida, as an A-4 attack replacement pilot. He was graduated from the Navy Test Pilot School at Patuxent and served as project officer on various aircraft for Navy preliminary evaluation, initial trials, and final board of inspection and survey trials at Patuxent from 1960 to 1963. He also attended the School of Aviation Safety at the University of Southern California.

He has more than 2,000 hours flying time, including about 1,800 in jet aircraft.

LT. EUGENE A. CERNAN (USN)

Lt. Eugene A. Cernan, 1410 Via Marettimo Way, Monterey, Calif., was born in Chicago, Ill., March 14, 1934. His parents, Mr. and Mrs. Andrew G. Cernan, reside at 939 Marshall, Bellwood, Ill. He received his high school diploma from Proviso Township High School at Maywood, Ill.

Cernan attended Purdue University at West Lafayette, Ind., and was graduated in 1956 with a bachelor of science degree in electrical engineering. He entered the Navy the same year. Since 1961 he has been a student at the U. S. Naval Post Graduate School at Monterey and is currently a candidate for a master of science degree in aeronautical engineering. Prior to his last assignment he was a member of Attack Squadrons 126 and 113 at Miramar, Calif., Naval Air Station.

He is six feet tall, weighs 175 pounds, and has brown hair and blue eyes. He is married to the former Barbara Jean Atchley of Corpus Christi, Tex., whose mother, Mrs. Jackie Mae Atchley, lives at 112 John A. St., in Baytown, Tex. The Cernans have a daughter, Teresa Dawn, born this year.

Cernan has logged more than 1,400 hours flying time, including more than 1,200 hours in jet aircraft. He is a member of Tau Beta Pi, national engineering society.

LT. ROGER B. CHAFFEE (USN)

Lt. Roger B. Chaffee, 1960 Redstone Dr., Fairborn, Ohio, was born in Grand Rapids, Mich., February 15, 1935. His parents, Mr. and Mrs. Donald L. Chaffee, live at 3710 Hazelwood SW, Grand Rapids, and he attended Central High School in that city.

Chaffee attended the Illinois Institute of Technology in Chicago, Ill., for one year, then transferred to Purdue University. He was graduated with a bachelor of science degree in aeronautical engineering in 1957, and entered the Navy in August that year. His last Navy assignment started in January 1963 as a student at the Air Force Institute of Technology at Wright-Patterson AFB, Ohio, where he is working toward a master of science degree in reliability engineering. Prior to entering AFIT, he was safety officer and quality control officer for Heavy Photographic Squadron 62 at the Jacksonville, Fla., Naval Air Station.

He is five-feet $9\frac{1}{2}$ -inches tall, weighs 157 pounds, and has brown hair and brown eyes. Chaffee is married to the former Martha Louise Horn, whose parents, Mr. and Mrs. Henry W. Horn, live at 1801 Dorchester Pl., Oklahoma City, Okla. The Chaffees have two children: Sheryl Lyn, 5; and Stephen Bruce, 2.

Chaffee has logged nearly 1,700 hours flying time, including more than 1400 hours in jet aircraft. He is a member of Tau Beta Pi, national engineering society; Sigma Gamma Tau; and Phi Kappa Sigma.

CAPT. MICHAEL COLLINS (USAF)

Capt. Michael Collins, 6766 Rickenbacker Dr., Edwards, Calif., was born in Rome, Italy, October 31, 1930, where his father, Maj. Gen. James L. Collins (USA deceased), served as military attache. His mother, Mrs. James L. Collins, now resides at 2126 Connecticut Ave. NW, Washington, DC. He was graduated from Albans School in Washington in 1948.

Collins attended the United States Military Academy, was graduated in 1952 with a bachelor of science degree, and chose an Air Force career. His last Air Force assignment was as an experimental flight test officer at the Air Force Flight Test Center, Edwards AFB, Calif. In that capacity he tested performance and stability and control characteristics of Air Force aircraft, primarily jet fighters.

He is five-feet $10\frac{1}{2}$ -inches tall, weighs 168 pounds, and has brown hair and brown eyes. Collins was married to the former Patricia Mary Finnegan of Boston, Mass., in Chambley, France, in 1957 and they have three children: Kathleen, 4; Ann Stewart, 2; and Michael Lawton, born this year.

Collins has flown more than 3,000 hours, including more than 2,700 hours in jet aircraft. He is a member of the Society of Experimental Test Pilots.

R. WALTER CUNNINGHAM

R. Walter Cunningham of 6640 Rubio Avenue, Van Nuys, California, was born in Creston, Iowa, March 16, 1932. His parents, Mr. and Mrs. Walter W. Cunningham, reside at 1022 Nowita Place, Venice, California, and he completed his secondary education at Venice High School.

He joined the Navy in January 1951 and went into flight training in July 1952. He joined a Marine squadron in 1953 and remains a Marine air reservist with the rank of captain, flying with VMA-134 at the Los Alamedos, California, Naval Air Station.

Cunningham, one of the two civilians selected, has been a research scientist for Rand Corporation. In 1960, he received from the University of California at Los Angeles a bachelor of arts degree in physics with honors and a master of arts degree in physics in 1961. He is currently completing requirements for a doctorate in physics at UCLA.

While working for the Rand Corporation, he performed error analysis and feasibility studies of defense against submarine-launched ballistic missiles and problems of the earth's magnetosphere. His latest work at UCLA has concerned development, testing and analysis of results of a tri-axial search coil magnetometer which will be flown aboard the first NASA Orbiting Geophysical Observatory satellite.

He is five-feet 10-inches tall, weighs 165 pounds, and has blond hair and blue eyes. Cunningham is married to the former Lo Ella Irby of Anaheim, California, whose mother, Mrs. Nellie Marie Maynard, lives at 2371 Ventura Boulevard, Oxnard, California.

Cunningham has logged almost 2,000 hours of flying time, including more than 1,350 hours in jet aircraft. He is a member of Sigma Pi Sigma, the American Geophysical Union, and Sigma Xi, national science research society.

CAPT. DONN F. EISELE (USAF)

Capt. Donn F. Eisele, 2059A Crossroads Pl., Kirtland AFB, N. Mex., was born in Columbus, Ohio, June 23, 1930. Mr. and Mrs. Herman E. Eisele, his parents, live at 248 N. Murray Hill Rd., in Columbus, and Eisele attended West Senior High School there.

He attended the United States Naval Academy and received a bachelor of science degree in 1952, and chose an Air Force career. In 1960, he received a master of science degree in astronautics from the Air Force Institute of Technology at Wright-Patterson AFB, Ohio.

Eisele is five-feet nine-inches tall, weighs 150 pounds, and has brown hair and blue eyes. He is married to the former Harriet Elaine Hamilton of Gnaddenhutten, Ohio. Her parents, Mr. and Mrs. Harry D. Hamilton live at 156 Moravian Ave. SW in that community. The Eiseles have three children: Melinda Sue, 9; Donn Hamilton, 7; and Matthew Reed, 2.

His last Air Force assignment before being named an astronaut was as flight commander and experimental test pilot at the Air Force Special Weapons Center at Kirtland AFB. In this capacity he flew experimental and developmental test flights in jet aircraft in support of special weapons development programs.

He has amassed more than 2,500 hours flying time, with more than 2,100 hours in jet aircraft. Eisele is a member of Tau Beta Pi, national engineering society.

CAPT. THEODORE C. FREEMAN (USAF)

Capt. Theodore C. Freeman, 6757 Rickenbacker Dr., Edwards, Calif., was born in Haverford, Penna., February 18, 1930. His parents, Mr. and Mrs. John Freeman, live near Lewes, Dela., where Freeman completed his secondary education in 1948.

He attended the University of Delaware at Newark for one year, then entered the United States Naval Academy and was graduated in 1953 with a bachelor of science degree. He elected to serve with the Air Force. In 1960, he received a master of science degree in aeronautical engineering from the University of Michigan.

Freeman is five-feet 10 $\frac{1}{2}$ -inches tall, weighs 139 pounds, and has brown hair and brown eyes. He is married to the former Faith Dudley Clark, whose parents, Mr. and Mrs. Walter E. Clark Jr., live on Grassy Hill Rd., Orange, Conn. They have a daughter, Faith Huntington, 9.

His last Air Force assignment was as a flight test aeronautical engineer and experimental flight test instructor at the Air Force's Aerospace Research Pilot School at Edwards AFB, Calif. He served primarily in performance flight testing and stability testing areas.

He has logged more than 3,000 hours flying time, including more than 2,000 hours in jet aircraft. Freeman is a member of the American Institute of Aeronautics and Astronautics.

LT. CMDR RICHARD F. GORDON JR. (USN)

Lt. Cmdr. Richard F. Gordon Jr., 1106 Spruance Rd., Monterey, Calif., was born in Seattle, Wash., October 5, 1929. Mrs . Richard F. Gordon, his mother, lives at 7336 17th St. NE in that city. He completed his secondary education at North Kitsap High School, Poulsbo, Wash.

Gordon received a bachelor of science degree in chemistry from the University of Washington in 1951, and entered the Navy in August that year. At the time of his selection as an astronaut he was a student at the U. S. Naval Post Graduate School at Monterey. Gordon is a graduate of the All-Weather Flight School and the Navy's Test Pilot School. Prior to entering the Monterey school, he was assigned to Fighter Squadron 96 at the Miramar, Calif., Naval Air Station, where he had served as flight safety officer, assistant operations officer and ground training officer.

He is five-feet seven-inches tall, weighs 150 pounds, and has brown hair and hazel eyes. He is married to the former Barbara Jean Field of Seattle, Wash., whose parents, Mr. and Mrs. Chester W. Field, live near Freeland, Wash. The Gordons have six children: Carlee Elizabeth, 9; Richard F. III, 8; Lawrence Joseph, 6; Thomas Alan, 4; James Edward, 3; and Diane Marie, 2.

He has logged nearly 2,800 hours flying time, with almost 2,000 hours in jet aircraft. Gordon won the Bendix Trophy Race from Los Angeles to New York in 1961.

RUSSELL L. SCHWEICKART

Russell L. Schweickart, who will observe his 28th birthday next Friday, was born in Neptune, N. J., October 25, 1935. He now lives at 4 Third St., Lexington, Mass. Mr. and Mrs. George L. Schweickart, his parents, live at 6 Eighth Ave., Seagirt, N. J.

After receiving his secondary education at Manasquan (NJ) High School, he attended Massachusetts Institute of Technology where he received a bachelor of science degree in aeronautical engineering in 1956 and a master of science degree in aeronautics and astronautics in 1963. His thesis was on stratospheric radiance.

Schweickart entered the Air Force in 1956 and became a pilot. He went on inactive duty in 1960, returned to MIT, but was called up for another year of active duty in the Fall of 1961. He holds the rank of captain in the Massachusetts Air National Guard.

He is six feet tall, weighs 158 pounds, and has red hair and blue eyes. He is married to the former Clare Grantham Whitfield, whose parents, Mr. and Mrs. Randolph Whitfield, live at 2540 Dellwood Dr. NW, Atlanta, Ga. The Schweickarts have two daughters: Vicki Louise, 4; and Elin Ashley, 2; and twin sons: Russell Brown and Randolph Barton, 3.

Prior to his selection as an astronaut he was a research scientist at the Experimental Astronomy Laboratory at MIT. Schweickart's duties there included research in upper atmospheric physics and applied astronomy as well as research in star tracking and stabilization of stellar images. He has logged more than 1,250 hours flying time, including almost 1,100 hours in jet aircraft.

CAPT. DAVID R. SCOTT (USAF)

Capt. David R. Scott, 107 16th St., Edwards, Calif., was born in San Antonio, Tex., June 6, 1932. His parents, Brig. Gen. and Mrs. Tom W. Scott (USAF retired), now live at 8438 Paseo Del Ocaso, La Jolla, Calif.

He attended the University of Michigan for one year, then entered the United States Military Academy and received a bachelor of science degree in 1954. At West Point, he finished fifth in a class of 633, and chose an Air Force career.

He attended Massachusetts Institute of Technology from 1960 to 1962 and earned both a master of science degree in aeronautics and astronautics and an engineer of aeronautics and astronautics degree while there. His thesis concerned interplanetary navigation. At the time of his selection for the astronaut program, he was a student at the Air Force Aerospace Research Pilot School at Edwards AFB, Calif.

Scott is six feet tall, weighs 190 pounds, and has blond hair and blue eyes. He is married to the former Ann Lurton Ott, daughter of Brig. Gen. and Mrs. Isaac W. Ott (USAF retired), who live at 115 Lagos Ave., San Antonio, Tex. The Scotts have two children: a daughter, Tracy Lee, 2; and a son, William Douglas, born this year.

He has logged more than 2,300 hours flying time, including nearly 2,100 hours in jet aircraft. Scott is a member of Tau Beta Pi, national engineering society; Sigma Xi, national science research society; Sigma Gamma Tau, and Sigma Chi.

CAPT. CLIFTON C. WILLIAMS JR., (USMC)

Capt. Clifton C. Williams Jr., stationed at Quantico, Va., was born in Mobile, Ala., September 26, 1932. He is the son of Mr. and Mrs. Clifton C. Williams who reside at 115 Mohawk St., Mobile, and he attended Murphy High School there.

Williams attended Spring Hill College from 1949 to 1951, then transferred to Auburn University where he completed his college work and was graduated in 1954 with a bachelor of mechanical engineering degree. He entered the Marines in August 1954. Williams is a graduate of the Navy Test Pilot School at Patuxent, Md., and is currently a student at the Marine Corps Intermediate Staff and Command School at Quantico.

He is six feet tall, weighs 187 pounds, and has brown hair and brown eyes. Williams is the only single astronaut selected for the NASA programs to date.

Prior to his assignment to the Marine School, he served at Patuxent as the F-8 project officer, A-4 project officer, and short airfield tactical support officer.

Williams has logged more than 1,800 hours flying time, including more than 1,300 hours in jet aircraft. He is a member of Sigma Chi, Pi Tau Sigma, national honorary mechanical society; Tau Beta Pi, national engineering society; and an associate member of the Society of Experimental Test Pilots.

Houston, Texas, October 18, 1963 - Where do America's latest astronauts come from? How do they compare with the Project Mercury astronauts and those selected in 1962? Some of the answers follow.

The new astronauts were born in nine states, Italy and Hong Kong. Texas, Ohio and New Jersey are states in which two of the group were born and Illinois, Michigan, Iowa, Washington, Alabama and Pennsylvania furnished one each. The fathers of the two born outside the United States were on foreign military duty at the time of their birth.

The astronauts selected in 1959 were born in Colorado, Oklahoma, Ohio, Indiana, New Jersey, New Hampshire and Wisconsin; and the group named in September 1962 included two born in Ohio, two in Texas and one from California, Pennsylvania, Indiana, Illinois, and Oklahoma.

The astronauts assigned to NASA's Manned Spacecraft Center were born in 15 states and two foreign countries with the state of Ohio providing five; Texas, four; New Jersey, three; Illinois, Pennsylvania, Oklahoma, and Indiana, two; and one each from Colorado, New Hampshire, Wisconsin, California, Michigan, Iowa, Washington, and Alabama.

Average age of the new group is 31. Those selected last year had an average age of 32.5 and the average age of the Mercury astronauts was 34.5 at time of selection. The average weight of the new group is 162 pounds, heavier than the average weight of the 1959 selectees, 159 pounds; and those selected last year, 161.5 pounds.

Although the latter two groups were permitted to be taller (six feet or less) than the first group (five-feet 10-inches or less), the average height of the three groups is remarkably close. The 1959 group's average height was 69.79 inches; the 1962 group, 69.94 inches; and the 1963 group, 70.1 inches.

There has been a natural decline in the total number of flying hours logged by the respective groups due to the fact that they have been successively

younger. However, the average jet time logged by the three groups has been about the same. The 1959 pilots selected had an average of more than 3,500 hours flying time, with 1,700 in jet aircraft; the 1962 selectees had average flying time of 2,800 hours, including 1,900 in jets; and the new group has logged an average of more than 2,300 with 1,800 in jet aircraft.

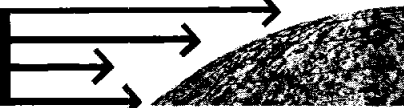
The importance of formal education is stressed, too, in comparative figures. In the new group, three of the seven with only bachelor's degrees are working toward master's degrees; six have received master's degrees, one of whom is working on a doctorate; and another has received his doctor of science degree. Six of those in the 1962 group have bachelor's degrees and the other three master's degrees. The first astronauts had an average of 4.3 years formal college training, the 1962 group, 4.6 years; and the 1963 selectees, 5.6 years.

What part, if any, do genetics play in astronaut selection? Personnel records indicate that a man with brown hair and blue eyes may have an advantage in being selected as an astronaut. There are 19 of the 30 with brown hair, seven blonds, two red-heads, and one each with auburn and black hair. Sixteen of the group have blue eyes; eight brown; three, green; and three, hazel.

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNNED SPACECRAFT
CENTER



**Houston
1, Texas**

Walnut 8-2811
Extension 3751

MSC 63-182
October 18, 1963

SPECIAL TO THE COLUMBUS DISPATCH AND CITIZEN-JOURNAL, OHIO

HOUSTON, TEXAS -- Air Force Captain Donn F. Eisele, one of the 14 new astronauts named today by the National Aeronautics and Space Administration, was born in Columbus and attended both West Junior High School and West Senior High School there. His parents, Mr. and Mrs. Herman E. Eisele, live at 248 N. Murray Hill Road.

Eisele, 33, is married to the former Harriet Elaine Hamilton of Gnadden-hutten, Ohio, and her parents, Mr. and Mrs. Harry D. Hamilton, reside in that community at 156 Moravian Avenue SW. The Eiseles are now living at Kirtland Air Force Base, New Mexico, with their three children: Melinda Sue, 9; Donn Hamilton, 7; and Matthew Reed, 2.

He is assigned as a flight commander and experimental test pilot at the USAF Special Weapons Center at Kirtland. Eisele was graduated from the U. S. Naval Academy in 1952 with a bachelor of science degree. He earned a master of science degree in astronautics at the Air Force Institute of Technology at Wright-Patterson AFB, Ohio, and is a graduate of the Air Force Aerospace Research Pilot School.

Add 1
Extension 3751

The announcement of the recruiting program for new astronauts was made by Manned Spacecraft Center Houston, Texas, early in June. With the selection today, MSC now has 30 astronauts assigned for the Gemini and Apollo projects.

The group named today included seven volunteers from the Air Force, four from the Navy, one from the Marine Corps, and two civilians. In addition to Eisele, the Air Force men selected were Maj. Edwin E. Aldrin, Jr., stationed at Houston, Texas; Capt William A. Anders, also stationed at Kirtland AFB; and Capts. David R. Scott, Charles A. Bassett II, Theodore C. Freeman, and Michael Collins, all assigned at Edwards AFB, California. The Navy volunteers are Lt. Cmdr. Richard F. Gordon, Jr., and Lt. Eugene A. Cernan, both assigned at Monterey, California; Lt. Alan L. Bean, Cecil Field, Florida; and Lt Roger B. Chaffee, assigned at Wright-Patterson AFB, Ohio. The Marine is Capt. Clifton C. Williams Jr., of Quantico, Va. The two civilians are R. Walter Cunningham of Van Nuys, Calif., a research scientist for Rand Corporation; and Russell L. Schweikart, a research scientist at Massachusetts institute of Technology, Cambridge, Massachusetts.

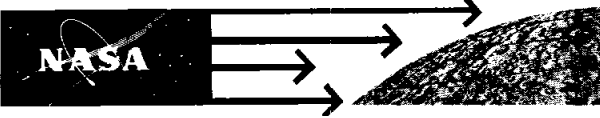
The new astronauts will probably report for duty and start training early in 1964, according to Astronaut Donald K. "Deke" Slayton, coordinator of astronaut activities at Manned Spacecraft Center.

###W

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNNED SPACECRAFT
CENTER



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-183
October 18, 1963

Special to the Albuquerque Journal and The Albuquerque Tribune

HOUSTON, TEXAS -- October 18, 1963 - Two United States Air Force Captains stationed at Kirtland Air Force Base, Donn F. Eisele and William A. Anders were among the 14 new astronauts named today by the National Aeronautics and Space Administration's Manned Spacecraft Center at Houston, Texas.

Eisele, 33, lives at 2059A Crossroads Place at Kirtland, with his wife Marriet Elaine, and their three children: Melinda Sue, 9; Donn Hamilton, 7; and Matthew Reed, 2. He was born at Columbus, Ohio. He was graduated from the U. S. Naval Academy with a bachelor of science degree in 1948, and received a master of science degree in astronautics from the Air Force Institute of Technology at Wright-Patterson AFB, Ohio, in 1960. He is also a 1962 graduate of the Air Force Aerospace Research Pilot School. At Kirtland, Eisele has served as a flight commander and experimental test pilot at the Special Weapons Center.

Anders, 30, lives at 10420 Princess Jeanne NE in Albuquerque with his wife, Valerie Elizabeth, and their three children, Alan Frank, 6; Glen Thomas 5; and Gayle Alison, 3. He was born in Hong Kong where his father was on military duty at the time. He is a 1955 graduate of the U S. Naval Academy with a bachelor of science degree, and earned a master of science degree in nuclear

Add 1
MSC 63-183

engineering at the Air Force Institute of Technology at Wright-Patterson Air Force Base, Ohio. Anders has done additional graduate work at Ohio State University. At Kirtland he has served as a nuclear engineer and instructor pilot at the Air Force Weapons Laboratory

The announcement of the recruiting program for the new astronauts was made by Manned Spacecraft Center early in June. With the selection today MSC now has 30 astronauts for the Gemini and Apollo Projects.

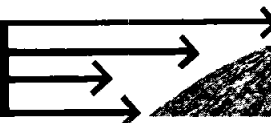
The group named today included seven volunteers from the Air Force four from the Navy, one from the Marine Corps, and two civilians. In addition to Eisele and Anders, the Air Force men selected were Major Edwin E. Aldrin, Jr., stationed at Houston, Texas; and Captains David R. Scott, Charles A. Bassett II, Theodore C. Freeman, and Michael Collins, all assigned at Edwards AFB, California. The Navy volunteers are Lt. Cmdr. Richard F. Gordon, Jr. and Lt. Eugene A. Cernan, both stationed at Monterey, California; Lt. Alan L. Bean, Cecil Field, Florida; and Lt. Roger B. Chaffee, stationed at Wright-Patterson AFB. The Marine ic Capt. Clifton C. Williams, Jr., of Quantico, Va. The two civilians are R. Walter Cunningham of Van Nuys, California, a research scientists for Rand Corporation; and Russell L. Schweickart, a research scientists at Massachusetts Institute of Technology, Cambridge, Massachusetts.

The new astronauts will probably report for duty and start training early in 1964, according to Astronaut Donald K. "Deke" Slayton, coordinator of astronaut activities at Manned Spacecraft Cneter, and Chairman of the 1963 Astronaut Selection Committee.

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT
CENTER



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-184
October 18, 1963

SPECIAL to The American, The News, The Sun-Times, and The Tribune, Chicago, Illinois

HOUSTON, TEXAS, - Navy Lt. Eugene A. Cernan, 29, son of Mr. and Mr. Andrew G. Cernan of 939 Marshall, Bellwood, Ill., was one of 14 new astronauts named today by the National Aeronautics and Space Administration's Manned Spacecraft Center in Houston, Texas.

He was born in Chicago March 14, 1934, and received his high school diploma from Proviso Township High School at Maywood in 1952. Cernan attended Purdue University at West Lafayette, Ind., and was graduated in 1956 with a bachelor of science degree in electrical engineering. He joined the Navy the same year.

Since 1961 Cernan has been a student at the U. S. Naval Post Graduate School at Monterey, Calif., and is currently a candidate for a master of science degree in aeronautical engineering. Prior to his last assignment he was a member of Attack Squadrons 126 and 113 at Miramar Naval Air Station, Calif.

He is six feet tall, weighs 175 pounds, and has brown hair and blue eyes. He is married to the former Barbara Jean Atchley of Corpus Christi, Tex. The Cernans live at 1410 Via Marettimo Way in Monterey with their daughter Teresa Dawn, born this year.

Add 1
MSC 63-184

Cernan has logged more than 1,400 hours flying time, including more than 1,200 in jet aircraft. He is a member of Tau Beta Pi, national engineering society.

The announcement of the recruiting program for new astronauts was made by Manned Spacecraft Center early in June. With the selection today, MSC now has 30 astronauts assigned for the Gemini and Apollo Projects.

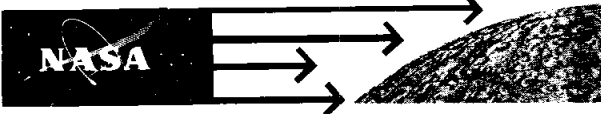
The group named today included seven volunteers from the Air Force, four from the Navy, two civilians, and one Marine. In addition to Cernan, they were: from the Air Force, Maj. Edwin E. Aldrin, Jr., stationed at Houston, Texas; Captains Williams A. Anders and Donn F. Eisele, stationed at Kirtland Air Force, New Mexico; and Captains David R. Scott, Charles A. Bassett, Theodore C. Freeman, and Michael Collins, all stationed at Edwards Air Force Base, California. The Navy volunteers are Lt. cmdr. Richard F. Gordon, also assigned at Monterey, California; Lt. Alan L. Bean, Cecil Field, Florida; and Lt. Roger B. Chaffee, assigned to Wright-Patterson AFB, Ohio. The marine is Capt. Clifton C. Williams, Jr. Quantico, Virginia. The two civilians are R. Walter Cunningham, Van Nuys, California, a research scientist from the Rand Corporation; and Russell L. Schweickart, a research scientist for Massachusetts Institute of Technology, Cambridge, Massachusetts.

The new astronauts will probably report for duty and start training early in 1964, according to Astronaut Donald K. "Deke" Slayton, coordinator for astronauts activities at Manned Spacecraft Center.

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNNED SPACECRAFT
CENTER



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-185
October 18, 1963

SPECIAL to the Toyal Oak Tribune, Royal Oak, Michigan

HOUSTON, TEXAS -- Air Force Captain Charles A. Bassett II, son of Mrs. Belle James Bassett, who resides at 4419 Goveland, Royal Oaks, was one of 14 new astronauts named today by the National Aeronautics and Space Administration's Manned Spacecraft Center in Houston, Texas.

Bassett, 31, who was born in Dayton, Ohio, is married to the former Jean Marion Martin, of North Hollywood, California. They have two children: Karen Elizabeth, 6; and Peter Martin, 2. They now live at Edwards, California. Bassett is now serving in the Fighter Projects Office at Edwards Air Force Base as an experimental flight test officer and engineering test pilot.

He attended Ohio State University from 1950 to 1952 and Texas Technological College, Lubbock, Texas, from 1958 to 1960. He was graduated from the latter school with a bachelor of science degree in electrical engineering. Since 1960 he has done graduate work at the University of Southern California. Bassett is also a graduate of the Air Force's Aerospace Research Pilot School and Experimental Test Pilot Course.

The group named today included seven volunteers from the Air Force, four from the Navy, one from the Marine Corps, and two civilians. In addition to Bassett, they were: from the Air Force, Maj. Edwin E. Aldrin, Jr., stationed at Houston, Texas; Captains William A. Anders and Donn F. Eisele, stationed at Kirtland Air Force Base, N. Mexico; and Captains David R. Scott, Theodore C. Freeman and Michael Collins, all stationed at Edwards AFB, California. The Navy volunteers are Lt. Cmdr. Richard F. Gordon, Jr. and Lt. Eugene A. Cernan, both assigned at Monterey, California; Lt. Alan L. Bean, Cecil Field, Florida; and Lt. Roger B. Chaffee, assigned to Wright-Patterson AFB, Ohio. The Marine is Capt. Clifton C. Williams Jr. of Quantico, Va. The two civilians are R. Walter Cunningham, Van Nuys, Calif., a research scientist for Rand Corporation and Russell L. Schweickart, a research scientist for Massachusetts Institute of Technology, Cambridge, Massachusetts.

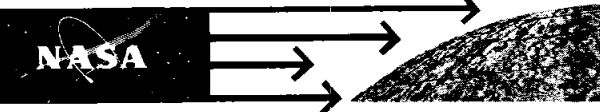
The new astronauts will probably report for duty and start training early in 1964, according to Astronaut Donald K. "Deke" Slayton, coordinator for astronaut activities at Manned Spacecraft Center.

###

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNNED SPACECRAFT
CENTER



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-186
October 18, 1963

SPECIAL to The New Philadelphia Times, New Philadelphia, Ohio

HOUSTON, TEXAS -- The son-in-law of a Gnaddenhutten couple was one of 14 new astronauts named today by the National Aeronautics and Space Administration's Manned Spacecraft Center in Houston, Texas . The new astronaut, Air Force Capt. Donn F. Eisele, is married to the former Harriet Elaine Hamilton, daughter of Mr. and Mrs. Harry D. Hamilton who reside at 156 Moravian Avenuw SW in Gnaddenhutten.

Eisele, 33, was born in Columbus, Ohio, and is currently stationed at Kirtland AFB, N. Mexico, where he has served as a flight commander and experimental test pilot at the Air Force Special Weapons Center. The Eiseles live at Kirtland with their three children, Melinda Sue, 9; Donn Hamilton, 7; and Matthew Reed, 2.

He was graduated from the U. S. Naval Academy in 1952 with a bachelor of science degree, and earned a master of science degree in astronautics at the Air Force Institute of Technology, Wright-Patterson AFB, Ohio. He is also a graduate of the Air Force Aerospace Research Pilot School.

^ Add 1
MSC 63-186

The announcement of the recruiting program for new astronauts was made by Manned Spacecraft Center early in June. With the selection today, MSC now has 30 astronauts assigned for the Gemini and Apollo Projects.

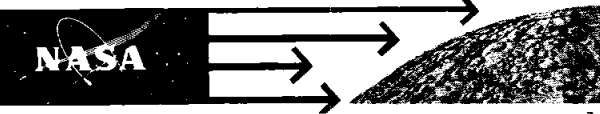
The group named today included seven volunteers from the Air Force, four from the Navy, one from the Marine Corps, and two civilians. In addition to Eisele, the Air Force Men selected were Maj. Edwin E. Aldrin, Jr., stationed at Houston, Texas; Capt. William A. Anders, also stationed at Kirtland AFB, and Captains David R. Scott, Charles A. Bassett II, Theodore C. Freeman, and Michael Collins, all stationed at Edwards Air Force Base, California. The Navy volunteers are Lt. Cmdr. Richard F. Gordon, Jr., and Lt. Eugene A. Cernan, both stationed at Monterey, California; Lt. Alan L. Bean, Cecil Field, Florida; and Lt. Roger B. Chaffee, assigned at Wright-Patterson AFB, Ohio. The Marine is Capt. Clifton C. Williams Jr. of Quantico, Virginia. The two civilians are R. Walter Cunningham of Van Nuys, California, a research scientist at Rand Corporation; and Russell L. Schweickart, a research scientist at Massachusetts Institute of Technology, Cambridge, Massachusetts.

The new astronauts will probably report for duty and start training early in 1964, according to Astronaut Donald K. "Deke" Slayton, coordinator of astronaut activities at Manned Spacecraft Center.

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNNED SPACECRAFT
CENTER



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-187
October 18, 1963

SPECIAL to The San Bernardino Sun and The San Bernardino Telegraph

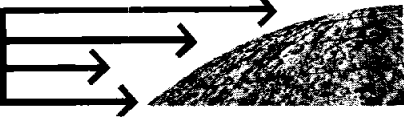
HOUSTON, TEXAS - The son-in-law of a Hesperia couple, Air Force Captain Charles A. Bassett, II, was one of 14 new astronauts named today by the National Aeronautics and Space Administration's Manned Spacecraft Center in Houston, Texas.

Bassett is married to the former Jean Marion Martin, daughter of Mr. and Mrs. Wiley O. Martin of Hesperia.

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNNED SPACECRAFT
CENTER



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-188
October 18, 1963

Special to the Monterey, California Peninsula Herald

HOUSTON, TEXAS -- Lt. Cmdr. Richard F. Gordon, Jr., 1106 Spruance Road, and Lt. Eugene A. Cernan, 1410 Via Marettimo Way, both students at the U. S. Naval Post Graduate School at Monterey, were among the 14 new astronauts named today by the National Aeronautics and Space Administration's Manned Spacecraft Center in Houston, Texas.

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNNED SPACECRAFT
CENTER

NASA



Houston
1, Texas

WAlnut 8-2811
Extension 3751

MSC 63-189
October 18, 1963

Special to the Trenton Times and the Trentonian, in Trenton, New Jersey

HOUSTON, TEXAS -- Russell L. Schweickart, son of Mr. and Mrs. George L. Schweickart of 6 Eight Ave., Seagirt, N. J., was one of 14 new astronauts named today by the National Aeronautics and Space Administration's Manned Spacecraft Center in Houston, Texas

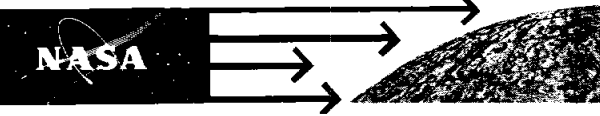
Schweickart, who will be 28 next Friday was born in Neptune, N. J., October 25, 1935, lives at 4 Third Street, Lexington, Mass. He is a research scientist at Massachusetts Institute of Technology. (NOTE TO EDITOR - Additional information concerning this activity will be filed by the wire service after 3:00 PM CST today)/

###

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT
CENTER



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-190
October 18, 1963

Special to the Newark News, The Star-Ledger, The Paterson Call and the Paterson News

HOUSTON, TEXAS - The parents of one of the 14 astronauts named today by the National Aeronautics and Space Administration, Air Force Maj. Edwin E. Aldrin, Jr., live in Montclair. In addition, Mrs. Aldrin's parents live in Ho-Ho-Kus.

Aldrin, 33, is the son of Mr. and Mrs. Edwin E. Aldrin, 180 Walnut, Montclair. They are currently at their summer home, 38 First Ave., Manasquan, N. J. Aldrin was born in Glen Ridge, N. J.; He is married to the former Joan Ann Archer of Ho-Ho-Kus, daughter of Mr. and Mrs. Michael Archer who now reside at 50 Edgewood, there. (Note to Editor - Additional information concerning this activity will be filed by the wire service after 3:00 pm CST today).

| | |
|--|--|
| NAME OF AGENCY NASA MSC Houston, Texas | PRECEDENCE |
| | ACTION: PRIORITY |
| | INFO.: PRIORITY |
| ACCOUNTING CLASSIFICATION | TYPE OF MESSAGE <input type="checkbox"/> SINGLE <input type="checkbox"/> BOOK |
| | <input checked="" type="checkbox"/> MULTI-ADDRESS |

COMMUNICATIONS

CLASSIFICATION

STANDARD FORM 14 REV. MARCH 15, 1957
GSA REGULATION 2-IX-203.04
14-303

TELEGRAPHIC MESSAGE

**OFFICIAL BUSINESS
U. S. GOVERNMENT**

THIS BLOCK FOR USE OF COMMUNICATIONS UNIT

MESSAGE TO BE TRANSMITTED (Use double spacing and all capital letters)

THIS COL. FOR AGENCY USE

MESSAGE ADDRESS HERE

DO NOT TYPE MESSAGE BEYOND THIS LINE

THE CHRISTIAN SCIENCE MONITOR MSC RELEASE-191-63
ONE NORWAY STREET
BOSTON, MASSACHUSETTS

and

THE GLOBE
135 MORRISSEY BOULEVARD
BOSTON, MASS.

and

THE HERALD
300 HARRISON AVE.
BOSTON, MASS.

and

THE TRAVELER
300 HARRISON AVE.
BOSTON, MASS.

FOR RELEASE AFTER 5:00 PM, CST, OCT. 18, 1963

**SPECIAL TO THE CHRISTIAN MONITOR, THE GLOBE, THE
HERALD, AND THE TRAVELER**

**Houston, Texas, October 18, 1963 - Russell L.
Schweickart, who will be 28 next Friday, a research
scientist at Massachusetts Institute of Technology,
who lives at 4 Third Street, in Lexington, was one
of the 14 new astronauts named today by the**

| | |
|----------|--------------|
| PAGE NO. | NO. OF PAGES |
| 1 | 2 |

| | |
|-------------------------------------|-----------------------|
| NAME AND TITLE OF ORIGINATOR (Type) | ORIGINATOR'S TEL. NO. |
|-------------------------------------|-----------------------|

| |
|-------------------------|
| DATE AND TIME PREPARED |
| SECURITY CLASSIFICATION |

I certify that this message is official business, is not personal, and is in the interest of the Government.

(Signature)

| | |
|--|---|
| NAME OF AGENCY NASA MSC Houston, Texas | PRECEDENCE |
| | ACTION: PRIORITY |
| ACCOUNTING CLASSIFICATION | INFO.: |
| | TYPE OF MESSAGE <input type="checkbox"/> SINGLE <input type="checkbox"/> BOOK <input checked="" type="checkbox"/> MULTI-ADDRESS |
| THIS BLOCK FOR USE OF COMMUNICATIONS UNIT | |

| | |
|---------------------------------------|--------------------------------------|
| CLASSIFICATION | STANDARD FORM 14 REV. MARCH 15, 1957 |
| | GSA REGULATION 2-IX-203.04 14-303 |
| TELEGRAPHIC MESSAGE | |
| OFFICIAL BUSINESS U. S. GOVERNMENT | |

MESSAGE TO BE TRANSMITTED (Use double spacing and all capital letters) THIS COL. FOR AGENCY USE

MESSAGE ADDRESS HERE

MSC RELEASE 191-63

National Aeronautics and Space Administration's Manned Spacecraft Center in Houston, Texas. He was born in Neptune, New Jersey, and his parents, Mr. and Mrs. George L. Schweickart, live at 6 Eighth Avenue, Seagirt, N. Jersey.

(NOTE TO EDITOR - Additional information concerning this activity will be filed by the wire service after 3:00 PM CST today).

DO NOT TYPE MESSAGE BEYOND THIS LINE

| | |
|----------|--------------|
| PAGE NO. | NO. OF PAGES |
| 2 | 2 |

| | |
|--|-----------------------|
| NAME AND TITLE OF ORIGINATOR (Type)  | ORIGINATOR'S TEL. NO. |
|--|-----------------------|

| |
|-------------------------|
| DATE AND TIME PREPARED |
| SECURITY CLASSIFICATION |

I certify that this message is official business, is not personal, and is in the interest of the Government.

(Signature)

| | |
|--|--|
| NAME OF AGENCY NASA MASC Houston Texas | PRECEDENCE |
| | ACTION: PRIORITY |
| ACCOUNTING CLASSIFICATION | INFO.: |
| | TYPE OF MESSAGE |
| | <input type="checkbox"/> SINGLE <input type="checkbox"/> BOOK <input checked="" type="checkbox"/> MULTI-ADDRESS |
| THIS BLOCK FOR USE OF COMMUNICATIONS UNIT | |

| |
|--|
| STANDARD FORM 14 REV. MARCH 15, 1957 GSA REGULATION 2-IX-203.04 14-303 |
| TELEGRAPHIC MESSAGE |
| OFFICIAL BUSINESS U. S. GOVERNMENT |

SECURITY CLASSIFICATION

MESSAGE TO BE TRANSMITTED (Use double spacing and all capital letters) THIS COL. FOR AGENCY USE

MESSAGE ADDRESS HERE

THE LOS ANGELES EXAMINER MSC RELEASE-192-63
1111 S. BROADWAY
LOS ANGELES, CALIFORNIA

And

THE LOS ANGELES HERALD & EXPRESS
1111 S. BROADWAY
LOS ANGELES, CALIFORNIA

and

THE LOS ANGELES MIRROR
145 S. SPRING STREET
LOS ANGELES, CALIFORNIA

AND

THE LOS ANGELES TIMES
202 WEST FIRST STREET
LOS ANGELES, CALIFORNIA

FOR RELEASE AFTER 3:00 PM, CST, OCT 18, 1963

SPECIAL TO THE EXAMINER, HERALD & EXPRESS, MIRROR AND

TIMES

Houston, Texas, October 18, 1963 - A civilian from

Van Nuys and four Air Force captains stationed at

Edwards Air Force Base were among the 14 new astronauts

named today by the National Aeronautics and Space

DO NOT TYPE MESSAGE BEYOND THIS LINE

| | |
|----------|--------------|
| PAGE NO. | NO. OF PAGES |
| 1 | 2 |

| | | |
|--|-----------------------|-------------------------|
| NAME AND TITLE OF ORIGINATOR (Type) Admin | ORIGINATOR'S TEL. NO. | DATE AND TIME PREPARED |
| I certify that this message is official business, is not personal, and is in the interest of the Government. | | SECURITY CLASSIFICATION |
| _____ (Signature) | | |

| | |
|---|---|
| NAME OF AGENCY NASA MSC Houston Texas | PRECEDENCE |
| | ACTION: |
| | INFO.: PRIORITY |
| ACCOUNTING CLASSIFICATION | TYPE OF MESSAGE |
| | <input type="checkbox"/> SINGLE <input type="checkbox"/> BOOK |
| | <input checked="" type="checkbox"/> MULTI-ADDRESS |

COMMUNICATIONS

CLASSIFICATION

STANDARD FORM 14 REV. MARCH 15, 1957
GSA REGULATION 2-IX-203.04
14-303

TELEGRAPHIC MESSAGE

OFFICIAL BUSINESS
U. S. GOVERNMENT

THIS BLOCK FOR USE OF COMMUNICATIONS UNIT

MESSAGE TO BE TRANSMITTED (Use double spacing and all capital letters)

THIS COL. FOR AGENCY USE

MESSAGE ADDRESS HERE

DO NOT TYPE MESSAGE BEYOND THIS LINE

MSC RELEASE 192-63


Administration at a news conference here today.

R. Walter Cunningham, a research scientist for Rand Corporation, lives at 6640 Rubio Ave. His parents, Mr. and Mrs. Walter W. Cunningham, reside at 1022 Nowita Place in Venice, where Cunningham attended high school.

The new astronauts, now assigned to Edwards, are Captains Charles A. Bassett II, 6848 Lindbergh; Michael Collins, 6766 Rickenbacker Drive; Theodore C. Freeman, 6757 Rickenbacker Drive; and David R. Scott, 107 16th Street.

(NOTE TO EDITOR - Additional information concerning this activity will be filed by the wire services after 3:00 PM CST today).

PAGE NO. NO. OF PAGES

| | | |
|--|-----------------------|------------------------|
| NAME AND TITLE OF ORIGINATOR (Type)  | ORIGINATOR'S TEL. NO. | DATE AND TIME PREPARED |
|--|-----------------------|------------------------|

SECURITY CLASSIFICATION

I certify that this message is official business, is not personal, and is in the interest of the Government.

(Signature)

| | |
|--|---|
| NAME OF AGENCY NASA MSC Houston, Texas | PRECEDENCE |
| | ACTION: |
| | INFO.: PRIORITY |
| ACCOUNTING CLASSIFICATION | TYPE OF MESSAGE <input type="checkbox"/> SINGLE <input type="checkbox"/> BOOK <input checked="" type="checkbox"/> MULTI-ADDRESS |
| THIS BLOCK FOR USE OF COMMUNICATIONS UNIT | |

| | |
|-------------------------|--|
| SECURITY CLASSIFICATION | STANDARD FORM 14 REV. MARCH 15, 1957 GSA REGULATION 2-IX-203.04 14-303 |
| | TELEGRAPHIC MESSAGE OFFICIAL BUSINESS U. S. GOVERNMENT |

MESSAGE TO BE TRANSMITTED (Use double spacing and all capital letters) THIS COL. FOR AGENCY USE

MESSAGE ADDRESS HERE

MSC RELEASE-193-63

**THE SAN DIEGO TRIBUNE
UNION-TRIBUNE BUILDING
SAN DIEGO, CALIFORNIA**

and

**THE SAN DIEGO UNION
UNION-TRIBUNE BUILDING
SAN DIEGO, CALIFORNIA**

FOR RELEASE AFTER 3:00 PM CST, Oct 18, 1963

SPECIAL TO THE SAN DIEGO TRIBUNE AND SAN DIEGO UNION

Houston, Texas, October 18, 1963 - The parents

of two of the 14 astronauts named today by the National Aeronautics and Space Administration, Air Force Captain David R. Scott and William A. Anders, live in La Jolla and La Mesa, respectively. In addition, Mrs. Anders' parents live in Lemon Grove.

Scott is the son of Brig. Gen. and Mrs. Tom W, Scott (USAF retired), 8438 Paseo Del Ocaso in La Jolla. Anders is the son of Cmdr. and Mrs. Arthur F. Anders, (USN retired), 4602 Resmar Dr., La Mesa. He is married to the former Valerie Elizabeth Hoard, whose parents,

DO NOT TYPE MESSAGE BEYOND THIS LINE

| | |
|----------|--------------|
| PAGE NO. | NO. OF PAGES |
| 1 | 2 |

| | | |
|--|-----------------------|-------------------------|
| NAME AND TITLE OF ORIGINATOR (Type) | ORIGINATOR'S TEL. NO. | DATE AND TIME PREPARED |
| I certify that this message is official business, is not personal, and is in the interest of the Government. | | SECURITY CLASSIFICATION |
| _____ (Signature) | | |

| | |
|---|---|
| NAME OF AGENCY NASA MSC, Houston, Texas | PRECEDENCE |
| | ACTION: PRIORITY |
| | INFO.: PRIORITY |
| ACCOUNTING CLASSIFICATION | TYPE OF MESSAGE <input type="checkbox"/> SINGLE <input type="checkbox"/> BOOK <input checked="" type="checkbox"/> MULTI-ADDRESS |
| THIS BLOCK FOR USE OF COMMUNICATIONS UNIT | |

| |
|--|
| STANDARD FORM 14 REV. MARCH 15, 1957 GSA REGULATION 2-IX-203.04 14-303 |
| TELEGRAPHIC MESSAGE |
| OFFICIAL BUSINESS U. S. GOVERNMENT |

SECURITY CLASSIFICATION

MESSAGE TO BE TRANSMITTED (Use double spacing and all capital letters)

THIS COL. FOR AGENCY USE

MESSAGE ADDRESS HERE

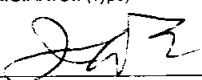
MSC RELEASE-193-63

**Mr. and Mrs. Henry G. Hoard, live at 2481 Bonita in
Lemon Grove.**

**(NOTE TO EDITOR: Additional information concerning
this activity will be filed by the wire services after
3:00 PM CST today).**

DO NOT TYPE MESSAGE BEYOND THIS LINE

| | |
|----------|--------------|
| PAGE NO. | NO. OF PAGES |
|----------|--------------|

| | | |
|--|-----------------------|-------------------------|
| NAME AND TITLE OF ORIGINATOR (Type)  | ORIGINATOR'S TEL. NO. | DATE AND TIME PREPARED |
| I certify that this message is official business, is not personal, and is in the interest of the Government. | | SECURITY CLASSIFICATION |
| _____ (Signature) | | |

| | |
|---|---|
| NAME OF AGENCY NASA MSC, Houston, Texas | PRECEDENCE |
| | ACTION: PRIORITY |
| ACCOUNTING CLASSIFICATION | INFO.: PRIORITY |
| | TYPE OF MESSAGE <input type="checkbox"/> SINGLE <input type="checkbox"/> BOOK <input checked="" type="checkbox"/> MULTI-ADDRESS |

SECURITY

CLASSIFICATION

STANDARD FORM 14 REV. MARCH 15, 1957
GSA REGULATION 2-IX-203.04
14-303

TELEGRAPHIC MESSAGE

OFFICIAL BUSINESS
U. S. GOVERNMENT

THIS BLOCK FOR USE OF COMMUNICATIONS UNIT

MESSAGE TO BE TRANSMITTED (Use double spacing and all capital letters)

THIS COL. FOR AGENCY USE

MSC RELEASE-194-63

**SAN ANTONIO NEWS
AVENUE E AND THIRD STREET
SAN ANTONIO, TEXAS**

and

**SAN ANTONIO EXPRESS
AVENUE E AND THIRD STREET
SAN ANTONIO, TEXAS**

and

**SAN ANTONIO LIGHT
420 BROADWAY
SAN ANTONIO, TEXAS**

FOR RELEASE AFTER 3:00 PM, CST, October 18, 1963

SPECIAL TO THE SAN ANTONIO NEWS, EXPRESS AND LIGHT

Houston, Texas, October 18, 1963 - Air Force

Captain David R. Scott, who was born in San Antonio,

was one of 14 new astronauts named today by the National

Aeronautics and Space Administration, in Houston, Texas.

He is married to the former Ann Lurton Ott, daughter of

Brig. Gen. and Mrs. Isaac W. Ott (USAF retired), 115

Lagos Ave., San Antonio.

(NOTE TO EDITOR: Additional information concerning

this activity will be filed by the wire services

DO NOT TYPE MESSAGE BEYOND THIS LINE

RT MESSAGE ADDRESS HERE

PAGE NO. **1** NO. OF PAGES **2**

| | | |
|-------------------------------------|-----------------------|------------------------|
| NAME AND TITLE OF ORIGINATOR (Type) | ORIGINATOR'S TEL. NO. | DATE AND TIME PREPARED |
|-------------------------------------|-----------------------|------------------------|

SECURITY CLASSIFICATION

I certify that this message is official business, is not personal, and is in the interest of the Government.

(Signature)

| | |
|---|--|
| NAME OF AGENCY NASA MSC, Houston, Texas | PRECEDENCE |
| | ACTION: |
| | INFO.: PRIORITY |
| ACCOUNTING CLASSIFICATION | TYPE OF MESSAGE |
| | <input type="checkbox"/> SINGLE <input type="checkbox"/> BOOK <input checked="" type="checkbox"/> MULTI-ADDRESS |

SECURITY CLASSIFICATION

STANDARD FORM 14 REV. MARCH 15, 1957
GSA REGULATION 2-IX-203.04
14-303

TELEGRAPHIC MESSAGE
OFFICIAL BUSINESS
U. S. GOVERNMENT

THIS BLOCK FOR USE OF COMMUNICATIONS UNIT

MESSAGE TO BE TRANSMITTED (Use double spacing and all capital letters)

THIS COL. FOR AGENCY USE

MSC RELEASE-194-63

after 3:00 PM CST today).

MESSAGE ADDRESS HERE

DO NOT TYPE MESSAGE BEYOND THIS LINE

| | |
|----------|--------------|
| PAGE NO. | NO. OF PAGES |
| 2 | 2 |

| | | |
|--|-----------------------|------------------------|
| NAME AND TITLE OF ORIGINATOR (Type) <i>JWZ</i> | ORIGINATOR'S TEL. NO. | DATE AND TIME PREPARED |
| I certify that this message is official business, is not personal, and is in the interest of the Government. | | |
| _____ (Signature) | | |

SECURITY CLASSIFICATION

| | | |
|---|---|---|
| NAME OF AGENCY NASA MSC, Houston, Texas | PRECEDENCE | SECURITY CLASSIFICATION |
| | ACTION: INFO: PRIORITY | |
| | TYPE OF MESSAGE <input type="checkbox"/> SINGLE <input type="checkbox"/> BOOK <input checked="" type="checkbox"/> MULTI-ADDRESS | |
| ACCOUNTING CLASSIFICATION | STANDARD FORM 14 REV. MARCH 15, 1957 GSA REGULATION 2-IX-203.04 14-303 | |
| THIS BLOCK FOR USE OF COMMUNICATIONS UNIT | | TELEGRAPHIC MESSAGE OFFICIAL BUSINESS U. S. GOVERNMENT |

MESSAGE TO BE TRANSMITTED (Use double spacing and all capital letters) THIS COL. FOR AGENCY USE

THE ATLANTA JOURNAL MSC RELEASE-195-63
 10 FORSYTH STREET
 ATLANTA, GEORGIA

and

THE ATLANTA CONSTITUTION
 10 FORSYTH STREET
 ATLANTA, GEORGIA

FOR RELEASE AFTER 3:00 PM, CST, OCTOBER 18, 1963

SPECIAL TO THE ATLANTA JOURNAL AND ATLANTA CONSTITUTION


Houston, Texas, October 18, 1963 - Russell L. Scweickart, a research scientist at Massachusetts Institute of Technology, who is married to the former Clare Grantham Whitfield, daughter of Mr. and Mrs. Randolph Whitfield, 2540 Dellwood Drive NW, Atlanta, was one of 14 new astronauts named today by the National Aeronautics and Space Administration in Houston, Texas.

(NOTE TO EDITOR: Additional information concerning this activity will be filed by the wire services after 3:00 PM, CST today).

MESSAGE ADDRESS HERE

DO NOT TYPE MESSAGE BEYOND THIS LINE

| | |
|----------------------|--------------------------|
| PAGE NO. 1 | NO. OF PAGES 1 |
|----------------------|--------------------------|

| | | |
|--|-----------------------|-------------------------|
| NAME AND TITLE OF ORIGINATOR (Type)  | ORIGINATOR'S TEL. NO. | DATE AND TIME PREPARED |
| I certify that this message is official business, is not personal, and is in the interest of the Government. | | SECURITY CLASSIFICATION |
| _____ (Signature) | | |

SECURITY CLASSIFICATION

| | |
|---|---|
| NAME OF AGENCY NASA MSC, Houston, Texas | PRECEDENCE |
| | ACTION: INFO.: PRIORITY |
| | TYPE OF MESSAGE <input type="checkbox"/> SINGLE <input type="checkbox"/> BOOK <input checked="" type="checkbox"/> MULTI-ADDRESS |

STANDARD FORM 14 REV. MARCH 15, 1957
GSA REGULATION 2-IX-203.04
14-303

TELEGRAPHIC MESSAGE
OFFICIAL BUSINESS
U. S. GOVERNMENT

ACCOUNTING CLASSIFICATION

THIS BLOCK FOR USE OF COMMUNICATIONS UNIT

MESSAGE TO BE TRANSMITTED (Use double spacing and all capital letters)

THIS COL. FOR AGENCY USE

SEATTLE TIMES **MSC RELEASE-196-63**
FAIRVIEW AVENUE NORTH AND JOHN STREET
SEATTLE, WASHINGTON

and

SEATTLE POST-INTELLIGENCER
SEATTLE, WASHINGTON

FOR RELEASE AFTER 3:00 PM CST, OCTOBER 18, 1963

**SPECIAL TO THE SEATTLE TIMES AND SEATTLE POST-INTELLI-
GENCER**

Houston, Texas, October 18, 1963 - Navy Lt. Cmdr.

**Richard F. Gordon Jr., son of Mrs. Richard F. Gordon,
7336 17th St. NE, Seattle, who is married to the former
Barbara Jean Field, whose parents, Mr. and Mrs. Chester
W. Field, who live near Freeland, was one of 14 new
astronauts named today by the National Aeronautics and
Space Administration in Houston, Texas, today.**

**(NOTE TO EDITOR: Additional information concerning this
activity will be filed by the wire services after
3:00 PM CST today).**

MESSAGE ADDRESS HERE

DO NOT TYPE MESSAGE BEYOND THIS LINE

| | |
|----------|--------------|
| PAGE NO. | NO. OF PAGES |
| 1 | 1 |

| | | |
|---|-----------------------|------------------------|
| NAME AND TITLE OF ORIGINATOR (Type) <i>[Signature]</i> | ORIGINATOR'S TEL. NO. | DATE AND TIME PREPARED |
|---|-----------------------|------------------------|

SECURITY CLASSIFICATION

I certify that this message is official business, is not personal, and is in the interest of the Government.

(Signature)

| | |
|---|---|
| NAME OF AGENCY NASA MSC, Houston, Texas | PRECEDENCE |
| | ACTION: INFO: PRIORITY |
| | TYPE OF MESSAGE <input type="checkbox"/> SINGLE <input type="checkbox"/> BOOK <input checked="" type="checkbox"/> MULTI-ADDRESS |

COMMUNICATIONS

CLASSIFICATION

STANDARD FORM 14 REV. MARCH 15, 1957
GSA REGULATION 2-IX-203.04
14-303

TELEGRAPHIC MESSAGE

**OFFICIAL BUSINESS
U. S. GOVERNMENT**

ACCOUNTING CLASSIFICATION

THIS BLOCK FOR USE OF COMMUNICATIONS UNIT

MESSAGE TO BE TRANSMITTED (Use double spacing and all capital letters)

THIS COL. FOR AGENCY USE

**NEW HAVEN REGISTER
367 ORANGE STREET
NEW HAVEN, CONNECTICUT**

MSC RELEASE-197-63

and

**NEW HAVEN JOURNAL-COURIER
367 ORANGE STREET
NEW HAVEN, CONNECTICUT**

FOR RELEASE AFTER 3:00 PM, CST, OCTOBER 18, 1963

SPECIAL TO THE REGISTER AND THE JOURNAL-COURIER


**Houston, Texas, October 18, 1963 - Air Force
Captain Theodore C. Freeman, who is married to the
former Faith Dudley Clark, daughter of Mr. and Mrs.
Walter E. Clark Jr., Grassy Hill Road, Orange, was one
of the 14 new astronauts named today by the National
Aeronautics and Space Administration at Houston, Texas.**

**(NOTE TO EDITOR: Additional information concerning
this activity will be filed by the wire services
after 3:00 PM, CST, today).**

MESSAGE ADDRESS HERE

DO NOT TYPE MESSAGE BEYOND THIS LINE

| | |
|----------------------|--------------------------|
| PAGE NO. 1 | NO. OF PAGES 1 |
|----------------------|--------------------------|

| | |
|--|-----------------------|
| NAME AND TITLE OF ORIGINATOR (Type)  | ORIGINATOR'S TEL. NO. |
| I certify that this message is official business, is not personal, and is in the interest of the Government. | |
| _____ (Signature) | |

DATE AND TIME PREPARED

SECURITY CLASSIFICATION

| | |
|---|---|
| NAME OF AGENCY NASA MSC, Houston, Texas | PRECEDENCE |
| | ACTION: |
| | INFO.: PRIORITY |
| ACCOUNTING CLASSIFICATION | TYPE OF MESSAGE <input type="checkbox"/> SINGLE <input type="checkbox"/> BOOK <input checked="" type="checkbox"/> MULTI-ADDRESS |
| THIS BLOCK FOR USE OF COMMUNICATIONS UNIT | |

| | |
|----------------|--|
| CLASSIFICATION | STANDARD FORM 14 REV. MARCH 15, 1957 GSA REGULATION 2-IX-203.04 14-303 |
| | TELEGRAPHIC MESSAGE OFFICIAL BUSINESS U. S. GOVERNMENT |

MESSAGE TO BE TRANSMITTED (Use double spacing and all capital letters)

THIS COL. FOR AGENCY USE

MESSAGE ADDRESS HERE

MSC RELEASE-198-63

DELAWARE STATE NEWS
10 NORTH STREET
DOVER, DELAWARE

FOR RELEASE AFTER 3:00 PM, CST, OCTOBER 18, 1963

SPECIAL TO THE DELAWARE STATE NEWS

Houston, Texas, October 18, 1963 - Air Force

Captain Theodore C. Freeman, son of Mr. and Mrs. John

Freeman, who live near Lewes, was one of the 14 new

astronauts named today by the National Aeronautics

and Space Administration today in Houston, Texas.

(NOTE TO EDITOR: Additional information concerning

this activity will be filed by the wire services

after 3:00 PM, CST, today).

DO NOT TYPE MESSAGE BEYOND THIS LINE

| | |
|----------|--------------|
| PAGE NO. | NO. OF PAGES |
| 1 | 1 |

| | | |
|--|-----------------------|-------------------------|
| NAME AND TITLE OF ORIGINATOR (Type) <i>[Signature]</i> | ORIGINATOR'S TEL. NO. | DATE AND TIME PREPARED |
| I certify that this message is official business, is not personal, and is in the interest of the Government. | | SECURITY CLASSIFICATION |
| _____ (Signature) | | |

| | |
|---|---|
| NAME OF AGENCY NASA MSC, Houston, Texas | PRECEDENCE |
| | ACTION: INFO.: PRIORITY |
| | TYPE OF MESSAGE <input type="checkbox"/> SINGLE <input type="checkbox"/> BOOK <input checked="" type="checkbox"/> MULTI-ADDRESS |
| ACCOUNTING CLASSIFICATION | |
| THIS BLOCK FOR USE OF COMMUNICATIONS UNIT | |

SECURITY CLASSIFICATION

STANDARD FORM 14 REV. MARCH 15, 1957
GSA REGULATION 2-IX-203.04
14-303

TELEGRAPHIC MESSAGE
OFFICIAL BUSINESS
U. S. GOVERNMENT

MESSAGE TO BE TRANSMITTED (Use double spacing and all capital letters)

THIS COL. FOR AGENCY USE

**FORT WORTH PRESS
FORT WORTH, TEXAS**

MSC RELEASE-199-63

and

**FORT WORTH STAR-TELEGRAM
SEVENTH AND TAYLOR STREETS
FORT WORTH, TEXAS**

and

**DALLAS NEWS
DALLAS, TEXAS**

and

**DALLAS TIMES-HERALD
HERALD SQUARE
DALLAS, TEXAS**

FOR RELEASE AFTER 3:00 PM, CST, OCTOBER 18, 1963

**SPECIAL TO THE FORT WORTH PRESS AND STAR-TELEGRAM:
AND DALLAS NEWS AND TIMES-HERALD**

**Houston, Texas, October 18, 1963 - Navy Lt. Alan
L. Bean, son of Mr. and Mrs. Arnold H. Bean, 3100
Bellaire Drive West, was one of the 14 new astronauts
named by the National Aeronautics and Space Adminis-
tration in Houston today. He is married to the
former Sue Ragsdale, daughter of Mr. and Mrs.**

RT MESSAGE ADDRESS HERE

DO NOT TYPE MESSAGE BEYOND THIS LINE

| | |
|----------------------|--------------------------|
| PAGE NO. 1 | NO. OF PAGES 2 |
|----------------------|--------------------------|

| | | |
|--|-----------------------|-------------------------|
| NAME AND TITLE OF ORIGINATOR (Type) | ORIGINATOR'S TEL. NO. | DATE AND TIME PREPARED |
| I certify that this message is official business, is not personal, and is in the interest of the Government. | | SECURITY CLASSIFICATION |
| _____ (Signature) | | |

| | | |
|--|---|-------------------------------|
| NAME OF AGENCY NASA MSC , Houston, Texas | PRECEDENCE | |
| | ACTION: | |
| | INFO.: PRIORITY | |
| ACCOUNTING CLASSIFICATION | TYPE OF MESSAGE | |
| | <input type="checkbox"/> SINGLE | <input type="checkbox"/> BOOK |
| | <input checked="" type="checkbox"/> MULTI-ADDRESS | |
| THIS BLOCK FOR USE OF COMMUNICATIONS UNIT | | |

| | |
|---|--------------------------------------|
| SECURITY CLASSIFICATION | STANDARD FORM 14 REV. MARCH 15, 1957 |
| | GSA REGULATION 2-IX-203.04 14-303 |
| TELEGRAPHIC MESSAGE | |
| OFFICIAL BUSINESS U. S. GOVERNMENT | |

MESSAGE TO BE TRANSMITTED (Use double spacing and all capital letters) THIS COL. FOR AGENCY USE

MESSAGE ADDRESS HERE


MSC RELEASE-199-63

Edward B. Ragsdale, 6914 Hyde Park Drive, Dallas.

(NOTE TO EDITOR: Additional information concerning this activity will be filed by the wire services after 3:00 PM, CST, today).

DO NOT TYPE MESSAGE BEYOND THIS LINE

| | |
|----------|--------------|
| PAGE NO. | NO. OF PAGES |
| 2 | 2 |

| | | |
|--|-----------------------|-------------------------|
| NAME AND TITLE OF ORIGINATOR (Type)  | ORIGINATOR'S TEL. NO. | DATE AND TIME PREPARED |
| I certify that this message is official business, is not personal, and is in the interest of the Government. | | SECURITY CLASSIFICATION |
| _____ (Signature) | | |

| | |
|--|---|
| NAME OF AGENCY NASA ISC, Houston, Texas | PRECEDENCE |
| | ACTION: INFO.: PRIORITY |
| ACCOUNTING CLASSIFICATION | TYPE OF MESSAGE <input checked="" type="checkbox"/> SINGLE <input type="checkbox"/> BOOK |
| | <input checked="" type="checkbox"/> MULTI-ADDRESS |

SECURITY CLASSIFICATION

STANDARD FORM 14 REV. MARCH 15, 1957
GSA REGULATION 2-IX-203.04
14-303

TELEGRAPHIC MESSAGE
OFFICIAL BUSINESS
U. S. GOVERNMENT

THIS BLOCK FOR USE OF COMMUNICATIONS UNIT

MESSAGE TO BE TRANSMITTED (Use double spacing and all capital letters)

THIS COL. FOR AGENCY USE

BAYTOWN SUN MSC RELEASE-200-63
BAYTOWN, TEXAS

FOR RELEASE AFTER 3:00 PM, CST, OCTOBER 18, 1963

SPECIAL TO THE BAYTOWN SUN

Houston, Texas, October 18, 1963 - Navy Lt.

Eugene A. Cernan, one of the 14 new astronauts named today by the National Aeronautics and Space Administration in Houston, is married to the former Barbara Jean Atchley of Corpus Christi, daughter of Mrs. Jackie Mae Atchley who lives at 112 John A Street, Baytown.

(NOTE TO EDITOR: Additional information concerning this activity will be filed by the wire services after 3:00 PM, CST, today).

MESSAGE ADDRESS HERE

DO NOT TYPE MESSAGE BEYOND THIS LINE

| | |
|----------|--------------|
| PAGE NO. | NO. OF PAGES |
| 1 | 1 |

| | | |
|--|-----------------------|------------------------|
| NAME AND TITLE OF ORIGINATOR (Type)  | ORIGINATOR'S TEL. NO. | DATE AND TIME PREPARED |
|--|-----------------------|------------------------|

SECURITY CLASSIFICATION

I certify that this message is official business, is not personal, and is in the interest of the Government.

(Signature)

| | |
|---|--|
| NAME OF AGENCY NASA MSC, HOUSTON, TEXAS | PRECEDENCE |
| | ACTION: |
| | INFO.: PRIORITY |
| ACCOUNTING CLASSIFICATION | TYPE OF MESSAGE <input type="checkbox"/> SINGLE <input type="checkbox"/> BOOK |
| | <input checked="" type="checkbox"/> MULTI-ADDRESS |

| | |
|--|----------------------------|
| STANDARD FORM 14 REV. MARCH 15, 1957 GSA REGULATION 2-IX-203.04 14-303 | CLASSIFICATION |
| | TELEGRAPHIC MESSAGE |
| OFFICIAL BUSINESS U. S. GOVERNMENT | |

| | | |
|---|--|--------------------------|
| THIS BLOCK FOR USE OF COMMUNICATIONS UNIT | MESSAGE TO BE TRANSMITTED (Use double spacing and all capital letters) | THIS COL. FOR AGENCY USE |
|---|--|--------------------------|

FAIRBORN HERALD
FAIRBORN, OHIO

MSC RELEASE-201-63

and

DAYTON NEWS
FOURTH AND LUDLOW STREETS
DAYTON, OHIO

and

DAYTON JOURNAL-HERALD
DAYTON, OHIO

FOR RELEASE AFTER 3:00 PM, CST, OCTOBER 18, 1963

SPECIAL TO THE FAIRBORN HERALD AND DAYTON NEWS AND
JOURNAL-HERALD

Houston, Texas, October 18, 1963 - Navy Lt.

Roger B. Chaffee, who lives at 1960 Redstone Drive,
Fairborn, was one of the 14 new astronauts named today
by the National Aeronautics and Space Administration
in Houston, Texas.

(NOTE TO EDITOR: Additional information concerning
this activity will be filed by the wire services
after 3:00 PM, CST, today).

| | |
|----------|--------------|
| PAGE NO. | NO. OF PAGES |
| 1 | 1 |

| | | |
|--|-----------------------|-------------------------|
| NAME AND TITLE OF ORIGINATOR (Type) <i>[Signature]</i> | ORIGINATOR'S TEL. NO. | DATE AND TIME PREPARED |
| I certify that this message is official business, is not personal, and is in the interest of the Government. | | SECURITY CLASSIFICATION |
| (Signature) | | |

| | |
|---|---|
| NAME OF AGENCY NASA MSC, HOUSTON, TEXAS | PRECEDENCE |
| | ACTION: PRIORITY |
| | INFO.: PRIORITY |
| ACCOUNTING CLASSIFICATION | TYPE OF MESSAGE <input checked="" type="checkbox"/> SINGLE <input type="checkbox"/> BOOK <input type="checkbox"/> MULTI-ADDRESS |
| THIS BLOCK FOR USE OF COMMUNICATIONS UNIT | |

SECURITY CLASSIFICATION

STANDARD FORM 14 REV. MARCH 15, 1957
GSA REGULATION 2-IX-203.04
14-303

TELEGRAPHIC MESSAGE
OFFICIAL BUSINESS
U. S. GOVERNMENT

MESSAGE TO BE TRANSMITTED (Use double spacing and all capital letters) THIS COL. FOR AGENCY USE

MESSAGE ADDRESS HERE

GRAND RAPIDS PRESS **MSC RELEASE-202-63**
20-24 E. FULTON STREET

GRAND RAPIDS, MICHIGAN


FOR RELEASE AFTER 3:00 PM, CST, OCTOBER 18, 1963
SPECIAL TO THE PRESS

Houston, Texas, October 18, 1963 - Navy Lt.
Roger B. Chaffee, son of Mr. and Mrs. Donald L.
Chaffee, 3710 Hazelwood SW, was one of the 14 new
astronauts named by the National Aeronautics and Space
Administration in Houston, Texas, today.

(NOTE TO EDITOR: Additional information concerning
this activity will be filed by the wire services
after 3:00 PM, CST, today).

DO NOT TYPE MESSAGE BEYOND THIS LINE

| | |
|----------------------|--------------------------|
| PAGE NO. 1 | NO. OF PAGES 1 |
|----------------------|--------------------------|

| | | |
|--|-----------------------|-------------------------|
| NAME AND TITLE OF ORIGINATOR (Type)  | ORIGINATOR'S TEL. NO. | DATE AND TIME PREPARED |
| I certify that this message is official business, is not personal, and is in the interest of the Government. | | SECURITY CLASSIFICATION |
| _____ (Signature) | | |

| | |
|---|---|
| NAME OF AGENCY NASA MSC, HOUSTON, TEXAS | PRECEDENCE |
| | ACTION: INFO.: PRIORITY |
| | TYPE OF MESSAGE <input type="checkbox"/> SINGLE <input type="checkbox"/> BOOK <input checked="" type="checkbox"/> MULTI-ADDRESS |
| ACCOUNTING CLASSIFICATION | |
| THIS BLOCK FOR USE OF COMMUNICATIONS UNIT | |

| | |
|---|--|
| SECURITY CLASSIFICATION | STANDARD FORM 14 REV. MARCH 15, 1957 GSA REGULATION 2-IX-203.04 14-303 |
| TELEGRAPHIC MESSAGE | |
| OFFICIAL BUSINESS U. S. GOVERNMENT | |

MESSAGE TO BE TRANSMITTED (Use double spacing and all capital letters) THIS COL. FOR AGENCY USE

OKLAHOMA CITY OKLAHOMAN
OKLAHOMA CITY, OKLAHOMA

MSC RELEASE-203-63

and

OKLAHOMA CITY TIME
OKLAHOMA CITY, OKLAHOMA

FOR RELEASE AFTER 3:00 PM, CST, OCTOBER 18, 1963

SPECIAL TO THE OKLAHOMAN AND TIMES

Houston, Texas, October 18, 1963 - Navy Lt.


Roger B. Chaffee, who is married to the former Martha Louise Horn, daughter of Mr. and Mrs. Henry W. Horn, 1801, Dorchester Place, is one of the 14 new astronaut named today by the National Aeronautics and Space Administration in Houston, Texas.

(NOTE TO EDITOR: Additional information concerning this activity will be filed by the wire services after 3:00 PM, CST, today).

MESSAGE ADDRESS HERE

DO NOT TYPE MESSAGE BEYOND THIS LINE

| | |
|----------------------|--------------------------|
| PAGE NO. 1 | NO. OF PAGES 1 |
|----------------------|--------------------------|

| | | |
|--|-----------------------|-------------------------|
| NAME AND TITLE OF ORIGINATOR (Type)  | ORIGINATOR'S TEL. NO. | DATE AND TIME PREPARED |
| I certify that this message is official business, is not personal, and is in the interest of the Government. | | SECURITY CLASSIFICATION |
| _____ (Signature) | | |

SECURITY CLASSIFICATION

STANDARD FORM 14 REV. MARCH 15, 1957
GSA REGULATION 2-IX-203.04
14-303

TELEGRAPHIC MESSAGE
OFFICIAL BUSINESS
U. S. GOVERNMENT

NAME OF AGENCY
NASA MSC, HOUSTON, TEXAS

PRECEDENCE
ACTION:
INFO: **PRIORITY**
TYPE OF MESSAGE
 SINGLE BOOK
 MULTI-ADDRESS

ACCOUNTING CLASSIFICATION
THIS BLOCK FOR USE OF COMMUNICATIONS UNIT

MESSAGE TO BE TRANSMITTED (Use double spacing and all capital letters)

THIS COL. FOR AGENCY USE

**THE MOBILE PRESS
304 GOVERNMENT STREET
MOBILE, ALABAMA**

MSC RELEASE-204-63

and

**THE MOBILE REGISTER
304 GOVERNMENT STREET
MOBILE, ALABAMA**

FOR RELEASE AFTER 3:00 PM, CST, OCTOBER 18, 1963

SPECIAL TO THE PRESS AND REGISTER

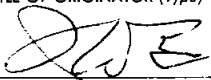
Houston, Texas, October 18, 1963 - Marine Capt.
Clifton C. Williams Jr., son of Mr. and Mrs. Clifton
C. Williams, 115 Mohawk St., was one of 14 new astro-
nauts named today by the National Aeronautics and
Space Administration in Houston, Texas.

(NOTE TO EDITOR: Additional information concerning
this activity will be filed by the wire services
after 3:00 PM, CST, today).

MESSAGE ADDRESS HERE

DO NOT TYPE MESSAGE BEYOND THIS LINE

PAGE NO. **1** NO. OF PAGES **1**

NAME AND TITLE OF ORIGINATOR (Type)


ORIGINATOR'S TEL. NO.

DATE AND TIME PREPARED

SECURITY CLASSIFICATION

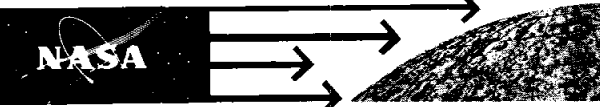
I certify that this message is official business, is not personal, and is in the interest of the Government.

(Signature)

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT
CENTER



**Houston
1, Texas**

Walnut 8-2811
Extension 3751

MSC 63-205
October 24, 1963

HOUSTON, TEXAS -- NASA Manned Spacecraft Center contracting officials have requested proposals for hauling and crating services for the Center's various locations.

The proposed contract will cover MSC's major move during February and March, 1964 from temporary quarters in Houston to the new permanent site at Clear Lake. It will also cover services between the Clear Lake site, Ellington Air Force Base and the leased temporary facilities.

The industry proposals are to be submitted in two parts. Part one covers the daily hauling of office equipment, scientific apparatus, supplies and materials and Part two will cover the major move.

At the time of the major move, it is estimated that nearly 13,000,000 pounds of equipment, machinery, tools, furniture, supplies and materials will be transported into Clear Lake and to Ellington AFB.

The proposal calls for a fixed-price type of contract and was initiated by MSC's Logistics Division. It will remain in operation for 12 months beginning after December 10, 1963.

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
MANNED SPACECRAFT CENTER Houston
1, Texas



Walnut 8-2811
Extension 3575

MSC 63-205
Oct. 23, 1963

HOUSTON, TEXAS -- Faith 7, the Mercury spacecraft flown by Astronaut Leroy Gordon Cooper in his earth circling 22 orbit flight will be on display October 31 through November 3 at Indianapolis, Indiana.

The four day stop in Indianapolis is the fifth of 50 state capitol visits that NASA has scheduled for Cooper's spacecraft. Close to 1,200,000 persons have already seen the spacecraft since it began this cross country tour in Cooper's home-state of Oklahoma.

Faith 7, its outer metal skin scorched from the searing heat of re-entry, will be on display in the State Capitol Building.

_____ said the spacecraft may be viewed _____

(dates to be announced by the governor).

The NASA Manned Spacecraft Center at Houston, Texas, has set Faith 7 on a stand which permits easy viewing of the inside of the spacecraft. A section of the base of the heat shield and portions of the outer skin have been cut away permitting the first public look at the inner structure of a Mercury spacecraft.

Add 1
MSC 63-205

The spacecraft - inside and out - is exactly as it was when it splashed down into the Pacific near Midway Island on May 16, 1963. Nothing has been changed. The spacecraft shingles - its outer skin made of a new metal rene' 41 - shows the effects of the 1,000 degree heat which blanketed the spacecraft during re-entry into earth's atmosphere. The heat shield - a mixture of glass fibers and resin - at the base of the spacecraft withstood maximum temperatures of 3,000 degrees fahrenheit when Cooper directed Faith 7 on its return to earth.

Also on display with the spacecraft are the cameras Cooper carried and the astronaut Survival Kit which rode on Faith 7's 546,185 mile earth-circling flight. Samples of the food Cooper ate during his day and a half in space will also be on display.

The 13 month tour, ending in the nation's capitol on November 1, 1964, will cover approximately 20,000 miles, a distance Faith 7 covered in space in approximately 80 minutes.

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT
CENTER

NASA



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC63-206
October 24, 1963

HOUSTON, TEXAS -- An advance notice of an invitation to bid on additional facilities construction at the NASA Manned Spacecraft Center here has gone out to contractors.

Builders have been invited by the Corps of Engineers, Fort Worth District, to submit proposals on construction having an approximate value of \$6,000,000.00.

The work will cover the following areas at the Center's Clear Lake site:

a. Construction of a Mission Simulation and Training Facility containing 54,537 square feet. The building will house trainers and mission simulators, a computer room, maintenance area and offices. The training building will contain a high bay area approximately 60 feet tall.

Trainer and simulation equipment will be furnished under another funding action.

b. An addition of approximately 8,200 square feet to the Central Heating and Cooling Plant which will contain one 60,000-pound-per-hour steam boiler and two 2,000-ton refrigeration units.

- more -

c. Expansion of the sewage treatment plant to permit treatment of 310,000 gallons of raw sewage per day. The present facility has a 160,000 gallon daily capacity.

d. Extension of approximately 2,000 feet of utility tunnels.

e. Expansion of the electrical distribution system.

f. The paving of 7.4 miles of roads.

g. The installation of storm drains, sidewalks and landscaping.

The total construction is to be completed within 15 months of contract award.

The Corps of Engineers told contractors that the formal issuance of notice to bid will be made November 21, with opening of bids on or about December 20.

Prime contractors are required to submit to a pre-qualification review to be eligible to bid on the work, the Corps said. Data for pre-qualification review must be submitted to the Corps' Fort Worth office by November 7.

A joint venture formed by contractors for the purpose of bidding on the proposed construction will be considered, providing other requirements are met.

The Corps also disclosed that firms interested as subcontractors or suppliers need not be pre-qualified in order to furnish their bids to the prime contractor.

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT
CENTER

NASA



Houston
1, Texas

WAlnut 8-2811
Extension 3751

MSC 63-207
October 28, 1963

Photo Outline

HOUSTON, TEXAS -- An Apollo prototype space suit, developed for the NASA Manned Spacecraft Center by Hamilton Standard Division of United Aircraft Corporation and the International Latex Corporation, is worn by an MSC engineer during tests at the Center.

The suit is used for research and development programs leading to the design of an operational space suit for astronauts who will make the lunar landing.

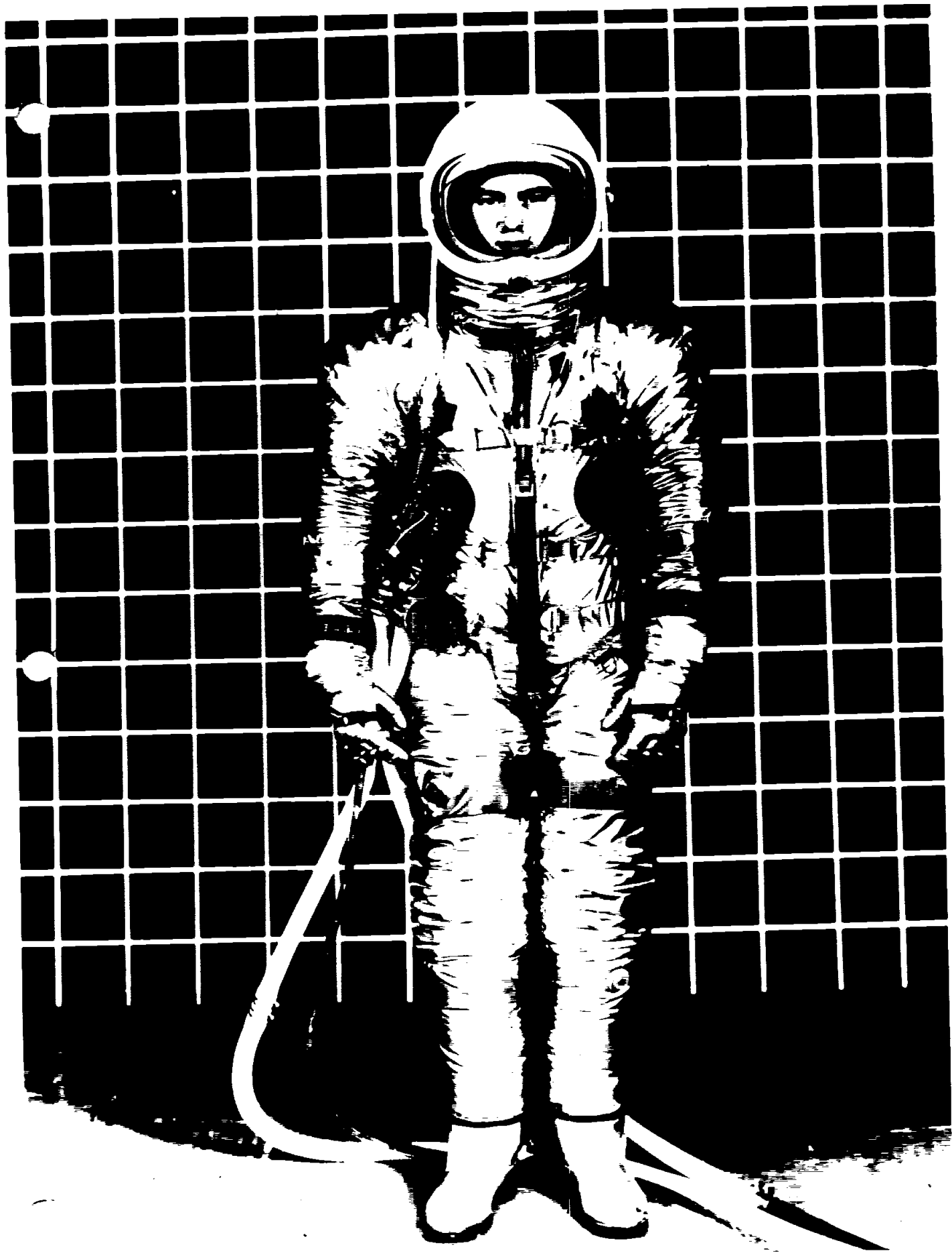
Suit assembly includes the torso unit with integrated boot, helmet, and quick disconnect gloves.

Plugs on the suit midriff are connectors supplying ventilation and pressurization to the space pilot. A communications outlet is attached to the helmet.

The pressure suit will be form fitting. It will be removed during certain periods of the lunar flight and the pilots will replace it with garmets affording greater comfort. Ease of donning is emphasized in design.

A back pack containing life support equipment will be added when the astronaut ventures from the Lunar Excursion Module for exploration of the surface of the moon.

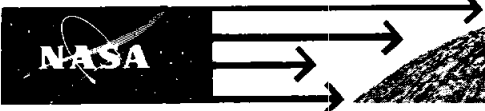
dg



90081-03-18908
NASA

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT CENTER  Houston
1, Texas

WAlnut 8-2811
Extension 3751

MSC 63-208
October 28, 1963

HOUSTON, TEXAS -- The NASA Manned Spacecraft Center has named Edwin Samfield as Chief of the Engineering Division in the Center's Office of Technical and Engineering Services.

As Engineering Division Chief, Samfield will be responsible for providing general engineering support to all groups at the Center.

Before joining the National Aeronautics and Space Administration, he was employed with Hamilton Standard Division of the United Aircraft Corporation at Windsor Locks, Connecticut.

Samfield also was an employee of the Lewis Research Laboratory of the National Advisory Committee for Aeronautics in Cleveland, Ohio.

He graduated from the University of Texas in 1943 with a bachelor of science degree in mechanical engineering, and has nearly 20 years of experience in the fields of equipment design and test in the aerospace industry.

He is a native of Port Arthur; is married and has one son.

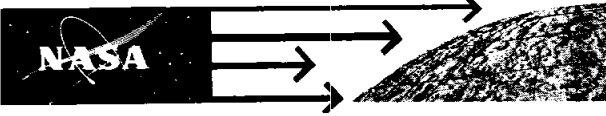
Samfield temporarily resides at Portofino Villa, Houston.

dg

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT
CENTER



**Houston
1, Texas**

Walnut 8-2811
Extension 3751

MSC 63-209
October 28, 1963

HOUSTON, TEXAS -- Approximately 30 NASA Manned Spacecraft Center employees, including the astronauts, moved from Houston into two rehabilitated buildings at Ellington Air Force Base over the week end.

The move was another in a series of realignments which will culminate with the major move to the permanent site in February and March 1964.

At that time over 2,000 employees, equipment, furniture and office supplies will be relocated. MSC will completely occupy the Clear Lake facility by July 1, 1964.

The rehabilitated buildings will serve as office space for the astronauts until their facility at Clear Lake is completed. When they leave Ellington, other MSC employees housed at the base will occupy the offices.

Current planning calls for continued MSC occupancy of some Ellington facilities.

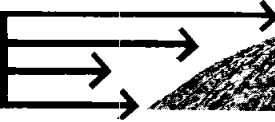
dg

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT
CENTER

NASA



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-210
October 28, 1963

HOUSTON, TEXAS -- Martin A. Byrnes, Jr., Manager of Missions and Operations Support at the NASA Manned Spacecraft Center, will address delegates to the 56th Annual Milk Industry Foundation convention November 8 in Dallas.

Byrnes' speech, entitled "The Development of the United States Manned Space Program," will review space flight from Project Mercury through the lunar landing program. He will talk before approximately 300 industry members.

Byrnes joined the National Advisory Committee for Aeronautics (predecessor of the National Aeronautics and Space Administration) May 2, 1946 and was assigned to the Langley Research Center in Virginia where he worked as a member of the contracting staff.

He was on the Site Survey Team which participated in the selection of the Houston area as permanent location for MSC. In September, 1961 he was appointed as Site Manager in Houston acting for the Director until his arrival.

Byrnes also worked on the X-15 flight test program and Project Mercury.

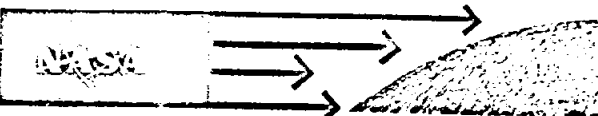
He was born in Washington, D. C. in 1918. Byrnes holds a bachelor of arts degree with a major in philosophy from St. Mary's University in Baltimore. He is a veteran of World War II. He entered the Army in 1942 and was discharged in 1946 with the rank of captain in the Corps of Engineers.

Byrnes is married and the father of two children.

NEWSPAPER RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT CENTER



Houston
1, Texas

Walnut 8-2811

Extension 3575

MSC 63 - 211
October 28, 1963

HOUSTON, TEXAS - Faith 7, Mercury spacecraft flown by Astronaut L. Gordon Cooper in his earth circling 22 orbit flight last May will be on display November 7 through November 10 in Columbus, Ohio.

The four day stop in Columbus is the fifth of 50 state capitol visits that the National Aeronautics and Space Administration has scheduled for Cooper's spacecraft. Close to 1,200,000 persons have already seen the spacecraft since it began its cross country tour in Cooper's home state of Oklahoma.

The NASA Manned Spacecraft Center at Houston, Texas, has set Faith 7 on a stand which permits easy viewing of the inside of the spacecraft. A section of the base of the heat shield and portions of the outer skin have been cut away permitting the first public look at the inner structure of a Mercury spacecraft.

The spacecraft - inside and out - is exactly as it was when it splashed down into the Pacific near Midway Island on May 16, 1963. Nothing has been changed. The spacecraft shingles - its outer skin made of a new metal rene' 41 - shows the effects of the 1,000 degree heat which blanketed the spacecraft during

JUL 12 1979

Add 1
MSC 63-211

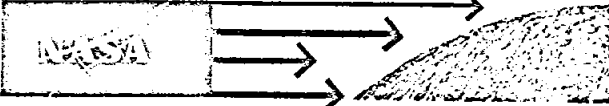
reentry into earth's atmosphere. The heat shield - a mixture of glass fibers and resin - at the base of the spacecraft withstood maximum temperatures of 3,000 degrees fahrenheit when Cooper directed Faith 7 on its return to earth.

Also on display with the spacecraft are the cameras Cooper carried and the astronaut Survival Kit which rode on Faith 7's, 546,185 mile earth-circling flight. Samples of the food Cooper ate during his day and a half in space will also be on display.

The 13 month tour, ending in the nation's capitol on November 1, 1964 will cover approximately 20,000 miles, a distance Faith 7 covered in space in approximately 80 minutes.

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT CENTER



Houston
1, Texas

Walnut 8-2811
Extension 3575

MSC 63 - 212
October 30, 1963

Jru

HOUSTON, TEXAS - Faith 7, Mercury spacecraft flown by Astronaut L. Gordon Cooper in his earth circling 22 orbit flight last May will be on display November 14 through November 17 in Frankfort, Kentucky.

The four day stop in Frankfort is the seventh of 50 state capitol visits that the National Aeronautics and Space Administration has scheduled for Cooper's spacecraft. Close to 1,400,000 persons have already seen the spacecraft since it began its cross country tour in Cooper's home state of Oklahoma.

The NASA Manned Spacecraft Center at Houston, Texas, has set Faith 7 on a stand which permits easy viewing of the inside of the spacecraft. A section of the base of the heat shield and portions of the outer skin have been cut away permitting the first public look at the inner structure of a Mercury spacecraft.

The spacecraft - inside and out - is exactly as it was when it splashed down into the Pacific near Midway Island on May 16, 1963. Nothing has been changed. The spacecraft shingles - its outer skin made of a new metal rene' 41 - shows the effects of the 1,000 degree heat which blanketed the spacecraft during re-entry into earth's atmosphere.

Add 1

MSC 63-212



The heat shield - a mixture of glass fibers and resin - at the base of the spacecraft withstood maximum temperatures of 3,000 degrees fahrenheit when Cooper directed Faith 7 on its return to earth.

Also on display with the spacecraft are the cameras Cooper carried and the astronaut Survival Kit which rode on Faith 7's 546,185 mile earth-circling flight. Samples of the food Cooper ate during his day and a half in space will also be on display.

The 13 month tour, ending in the nation's capitol on November 1, 1964 will cover approximately 20,000 miles, a distance Faith 7 covered in space in approximately 80 minutes.

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT CENTER   Houston
1, Texas

WA8-2811
Extension 3575

MSC 63- 213
November 8, 1963

HOUSTON, TEXAS - Faith 7, Mercury spacecraft flown by Astronaut L. Gordon Cooper in his earth circling 22 orbit flight last May will be on display November 21 through November 24, in Charleston, West Virginia.

The four day stop in Charleston is the eighth of 50 state capitol visits that the National Aeronautics and Space Administration has scheduled for Cooper's spacecraft. Close to 1,450,000 persons have already seen the spacecraft since it began its cross country tour in Cooper's home state of Oklahoma.

The NASA Manned Spacecraft Center at Houston, Texas, has set Faith 7 on a stand which permits easy viewing of the inside of the spacecraft. A section of the base of the heat shield and portions of the outer skin have been cut away permitting the first public look at the inner structure of a Mercury spacecraft.

The spacecraft - inside and out - is exactly as it was when it splashed down into the Pacific near Midway Island on May 16, 1963. Nothing has been changed. The spacecraft shingles - its outer skin made of a new metal rene' 41 - shows the effects of the 1,000 degree heat which blanketed the spacecraft during re-entry into earth's atmosphere. The heat shield - a mixture of glass fibers and resin - at the base of the spacecraft withstood maximum temperatures of 3,000 degrees Fahrenheit when Cooper directed Faith 7 on its return to earth.

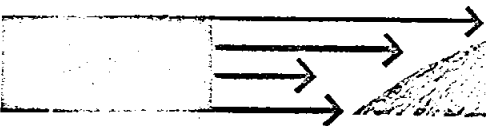
Add 1
MSC 63-213

Also on display with the spacecraft are the cameras Cooper carried and the astronaut Survival Kit which rode on Faith 7's 546,185 mile earth-circling flight. Samples of the food Cooper ate during his day and a half in space will also be on display.

The 13 month tour, ending in the nation's capitol on November 1, 1964, will cover approximately 20,000 miles, a distance Faith 7 covered in space in approximately 80 minutes.

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT CENTER



Houston
1, Texas

WAS-2811
Extension 3575

MSC 63-214
November 15, 1963

HOUSTON, TEXAS - Faith 7, Mercury spacecraft flown by Astronaut L. Gordon Cooper in his earth circling 22 orbit flight last May will be on display November 28 through Dec. 1 in Richmond, Virginia.

The four day stop in Richmond is the ninth of 50 state capitol visits that the National Aeronautics and Space Administration has scheduled for Cooper's spacecraft. Close to 1,450,000 persons have already seen the spacecraft since it began its cross country tour in Cooper's home state of Oklahoma.

The NASA Manned Spacecraft Center at Houston, Texas, has set Faith 7 on a stand which permits easy viewing of the inside of the spacecraft. A section of the base of the heat shield and portions of the outer skin have been cut away permitting the first public look at the inner structure of a Mercury spacecraft.

The spacecraft - inside and out - is exactly as it was when it splashed down into the Pacific near Midway Island on May 16, 1963. Nothing has been changed. The spacecraft shingles - its outer skin made of a new metal rene' 41 - shows the effects of the 1,000 degree heat which blanketed the spacecraft during re-entry into earth's atmosphere.

Add 1

MSC 63-215

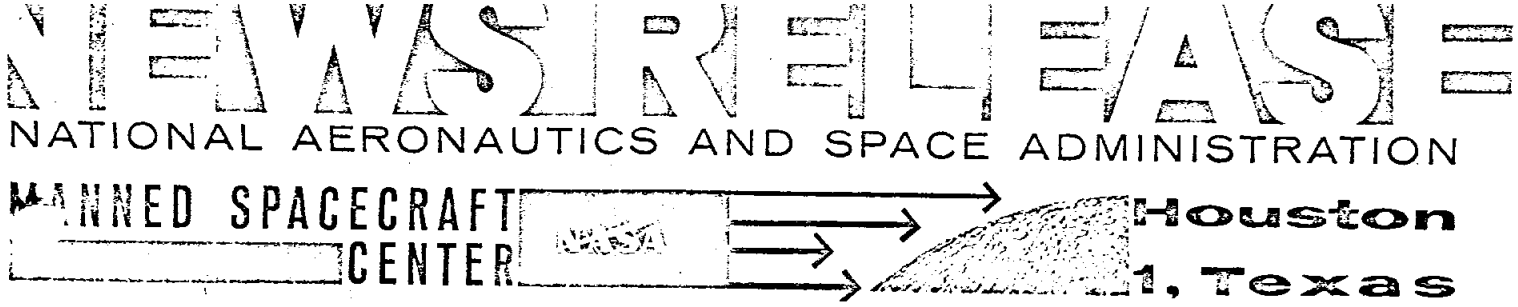
The heat shield - a mixture of glass fibers and resin - at the base of the spacecraft withstood maximum temperatures of 3,000 degrees farenheit when Cooper directed Faith 7 on its return to earth.

Also on display with the spacecraft are the cameras Cooper carried and the astronaut Survival Kit which rode on Faith 7's 546,185 mile earth-circling flight. Samples of the food Cooper ate during his day and a half in space will also be on display.

The 13 month tour, ending in the nation's capitol on November 1, 1964 will cover approximately 20,000 miles, a distance Faith 7 covered in space in approximately 80 minutes.

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
MANNED SPACECRAFT CENTER Houston
1, Texas



WA8-2811
EXTension 3575

MSC 63-215
November 22, 1963

HOUSTON, TEXAS - Faith 7, Mercury spacecraft flown by Astronaut L. Gordon Cooper in his earth circling 22 orbit flight last May will be on display December 5 through December 8 in Raleigh, North Carolina.

The four day stop in Raleigh is the tenth of 50 state capitol visits that the National Aeronautics and Space Administration has scheduled for Cooper's spacecraft. Close to 1,475,000 persons have already seen the spacecraft since it began its cross country tour in Cooper's home state of Oklahoma.

The NASA Manned Spacecraft Center at Houston, Texas, has set Faith 7 on a stand which permits easy viewing of the inside of the spacecraft. A section of the base of the heat shield and portions of the outer skin have been cut away permitting the first public look at the inner structure of a Mercury spacecraft.

The spacecraft - inside and out - is exactly as it was when it splashed down into the Pacific near Midway Island on May 16, 1963. Nothing has been changed. The spacecraft shingles - its outer skin made of a new metal rene' 41 - shows the effects of the 1,000 degree heat which blanketed the spacecraft during re-entry into earth's atmosphere.

Add 1

MSC 63-215

The heat shield - a mixture of glass fibers and resin - at the base of the spacecraft withstood maximum temperatures of 3,000 degrees farenheit when Cooper directed Faith 7 on its return to earth.

Also on display with the spacecraft are the cameras Cooper carried and the astronaut Survival Kit which rode on Faith 7's 546,185 mile earth-circling flight. Samples of the food Cooper ate during his day and a half in space will also be on display.

The 13 month tour, ending in the nation's capitol on November 1, 1964 will cover approximately 20,000 miles, a distance Faith 7 covered in space in approximately 80 minutes.

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT
CENTER



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-216
October 29, 1963

HOUSTON, TEXAS -- The AVCO Corporation of Wilmington, Massachusetts, has been requested by the NASA Manned Spacecraft Center to develop a computer program to study the behavior of air around the blunt region of the Apollo spacecraft during reentry into earth's atmosphere.

The study is a continuation of a program originally conducted by AVCO to develop equations for computer use.

MSC's initial contract with AVCO studied the radiated properties of air as well as developing the theoretical analysis on which the news program will be based. The initial study will end November 22, 1963. Its cost was \$197,940.00.

Under the new proposal, the equations derived from the theoretical studies will be fed into a digital computer for answers. From these answers, will come information on temperature, pressures, shock wave shape and velocities for additional calculations on heat transfer to the spacecraft.

AVCO's proposal must be submitted by October 31. While a fixed-price type of contract is contemplated, MSC will consider also a cost-plus-fixed-fee contractual arrangement.

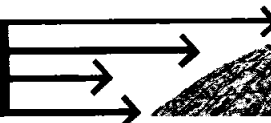
The computer program is being developed for the Spacecraft Technology Division.

dg

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT
CENTER



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-217
October 30, 1963

HOUSTON, TEXAS -- Small businesses interested in performing custodial services for the space agency have been invited to submit bids, the NASA Manned Spacecraft Center said today.

The work will be done at the Clear Lake site, Ellington Air Force Base and at leased locations in Houston. In its invitation, MSC requested service on a daily, weekly and monthly basis.

Bids are due by November 15, 1963. The contract will run for 13 months from the date of award.

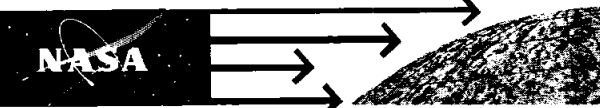
Southeastern Storage and Processing Company, Inc., Raleigh, North Carolina, holds the current contract. Its contract will expire November 30.

dg

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT
CENTER



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-218
October 30, 1963

HOUSTON, TEXAS -- The NASA Manned Spacecraft Center today awarded a \$875,276.00 cost-plus incentive-fee contract to the Zia Company, Los Alamos, for maintenance and support operations at the space agency's White Sands Missile Range facility in New Mexico.

The contract calls for 1) maintenance and operation of buildings and equipment, 2) maintenance of roads and grounds, 3) fire protection, 4) maintenance of an industrial dispensary, 5) the operation of a water pumping and a sewage treatment plant, 6) maintenance and operation of the cryogenics and propellant storage areas, 7) transportation of equipment, and 8) maintenance and upkeep of special vehicles.

Some \$708,564.00 of the total amount covers labor costs during the period of the contract. These costs are tied in with the incentive provisions. If Zia can reduce its supervisory costs ^{below} 20 per cent ^{of} ~~below~~ the total labor costs, the company will earn an incentive reward up to \$10,000. If -- on the other hand -- the company's supervisory costs exceed 30 per cent of the total labor costs, then its profit margin will be reduced, but not to exceed \$5,000.00. Supervisory costs between 20 and 30 per cent result in neither reward nor penalty.

The contract will begin November 1, 1963 and continue for 12 months.

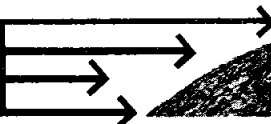
MSC solicited 134 industries for maintenance and support at White Sands. Of this group, 29 responded with proposals. The contract was made for the Apollo Project Office.

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT
CENTER

NASA



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-219
October 30, 1963

HOUSTON, TEXAS -- The space agency has requested industry to build a light-weight life support system which will allow Gemini astronauts to leave their spacecraft for periods up to three-quarters of an hour.

The pack, called an Extra-Vehicular Pressurization Ventilation System by the NASA Manned Spacecraft Center, probably will weigh no more than 24 pounds and may be worn either on the abdomen or thigh.

A new feature of the industry proposal covers an incentive plan whereby the contractor's profit could reach as much as 12 per cent of the probable cost based on early delivery and reliable work.

Fee for normal delivery will not exceed seven per cent of the target cost of design, fabrication, testing and delivery of the life support system.

A penalty will be assessed against the contractor if he fails to meet delivery schedule. The penalty will be in the form of a percentage assessment against his profit. This will help defray government costs.

- more -

The proposal calls for eight life support units -- not including the mockup -- to be built in four different work phases. The first phase will include study and a full scale mockup and must be completed within two months of the notice to proceed with work. Phase number two will consist of development of two prototype units. These are to be delivered by four and one-half months after contract signing or earlier.

Phase number three calls for the development and delivery of four improved units between the eighth and 11th months and phase number four calls for incorporation of all previous modifications into two flight qualified units. This must be done within 11 months of the contract or earlier in order to qualify for the incentive rewards.

MSC calls for a ventilation system capable of providing 100 per cent oxygen for astronaut consumption. There are also provisions for carbon dioxide and thermal control. In the event of a suit leak, the unit must have the capability of maintaining oxygen and pressure for five minutes. This theoretically will give the pilot time to reenter the Gemini spacecraft.

The oxygen reservoir will be contained in a nine inch diameter bottle shaped like a child's ball. Total weight of the life support unit will be approximately 20 pounds with four pounds of oxygen added prior to the flight.

The life support system will consist of an oxygen reservoir and quantity indicator, valves to control the flow of oxygen, thermal insulation, connecting hoses and a suit pressure control.

The thermal control unit will permit oxygen to enter the suit at approximately 40 degrees fahrenheit even though temperatures in the space environment will be considerably higher or lower.

Proposals, to be submitted by November 25, 1963, should cover cost of production and a technical evaluation, MSC said. The life support unit is to be developed for MSC's Crew Systems Division.

Project Gemini is this nation's effort to send two astronauts on orbital space missions for periods up to two weeks to practice rendezvous techniques and to observe the physiological effects of prolonged periods of space flights.

dg

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNNED SPACECRAFT
CENTER



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-220
October 31, 1963 pm's

HOUSTON, TEXAS -- The NASA Manned Spacecraft Center today awarded a contract valued at \$1,595,000.00 to Radiation, Inc., Melbourne, Florida, that includes incentive clauses which could increase by \$9,000.00 the total value of the work.

Contractor will provide additional command equipment which is similar to equipment being built by Radiation, Inc., for the manned spaceflight network under a Goddard Space Flight Center contract.

The contract is for construction and installation of two Master Digital Command Systems to be installed in the Mission Control Center at Clear Lake, and a Data Router and Error Detector to be placed in the Mission Control Center at Cape Canaveral.

A penalty, as well as the incentive award, also is included in the contract. The penalty and incentive award apply only to the Master Digital Command System. MSC spelled out the two formulas as follows:

Contract calls for delivery of the first MDCS within nine months of receipt of the contract award. Contractor will receive a bonus of \$200.00 daily up to 15 days for early delivery of the first unit.

- more -

Add 1
MSC 63-220

Contract calls for delivery of the second unit within ten months of receipt of the contract award. Contractor will receive a similar bonus, but up to 30 days for delivery of the second system.

Penalty for late delivery is set at the rate of \$200.00 per system for the first 15 days. On the 16th day, penalty per system increases by \$20.00 and graduates in the same increments daily up to 30 days. Maximum penalty, therefore, could reach \$8,400 per system.

The digital systems are designed to transmit real-time computer data through a world-wide network to manned spacecraft. MDCS will automatically command their systems to perform flight functions. This data in turn will be displayed on the space vehicle's console as information for the astronauts.

The data router and error detector receives all commands for routing to Atlantic Missile Range and transmission on to the spacecraft.

The contract also calls for Radiation, Inc. to provide Center personnel with two weeks training in the operation of the MDCS before installation, and it calls for about 200 hours of engineering consulting services to be performed in Houston.

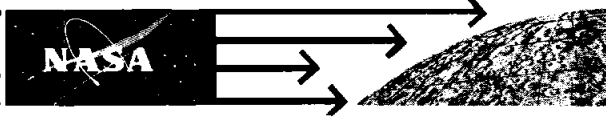
Radiation, Inc. will supervise installation of the two huge electronic complexes and insure that the systems operate properly with other equipment in the MCC.

Work on the systems will be done at Radiation's Melbourne plant for MSC's Ground System Project Office.

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNNED SPACECRAFT
CENTER



Houston
1, Texas

WAlnut 8-2811
Extension 3751

MSC 63-221
October 31, 1963

HOUSTON, TEXAS -- Space Ordnance Systems, Inc. of El Segundo, California has been selected by North American Aviation to provide a series of ordnance devices for the Apollo spacecraft, according to an announcement today by the NASA Manned Spacecraft Center.

The contract is expected to exceed \$300,000 by completion.

Under the contract, Space Ordnance will design, develop and fabricate explosive devices that will actuate and initiate components and assemblies in the Apollo spacecraft.

These components will be integrated into the various spacecraft module systems. Explosive devices are used to perform critical separation functions because of their high-power-to-weight ratio, their small size and their high reliability.

Jettison of the various portions of the Apollo vehicle as they cease to be needed after fulfilling their function affects success or failure of the entire mission.

The part to be furnished by Space Ordnance Systems include initiators, detonators, igniters and pressure cartridges.

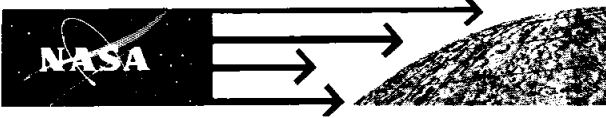
Apollo is this nation's program to land an astronaut team on the moon and return it safely to earth before the end of this decade.

dg

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNNED SPACECRAFT
CENTER



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-222
October 31, 1963

HOUSTON, TEXAS -- The Marquardt Corporation of Van Nuys, California, received a definitive contract from North American Aviation's Space and Information Systems Division for \$9,353,200 for initial development and production of reaction control engines for the Apollo Service Module, according to an announcement by the NASA Manned Spacecraft Center.

The contract covers services and supplies for Project Apollo airframes and is scheduled for completion in mid-1964.

Each Service Module will require sixteen 100 pound thrust reaction control engines. The engines are designed to provide precisely controlled thrust to maintain attitude control and stabilization on flight articles en route to the moon and back and during lunar and earth orbit.

Marquardt delivered the first engine to North American, prime contractor for the Apollo Command and Service Modules in November 1962. A total of eight engines have been delivered since Marquardt was selected to participate in the Apollo program in February, 1962.

dg

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT
CENTER



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-223
November 1, 1963

HOUSTON, TEXAS -- A contract amendment in the amount of \$2, 247, 174. 00 was issued today by the NASA Manned Spacecraft Center to General Dynamics/Convair, San Diego, California, for two more Little Joe II solid propellant suborbital launch vehicles to be used in the Apollo test program.

Addition of the two launch vehicles brings procurement costs for Little Joe II boosters to \$8, 928, 637. This includes nearly \$500, 000 for design, development and installation of two launchers at the White Sands Missile Range, New Mexico.

The two new boosters will be used in a high altitude abort test -- approximately 60, 000 feet -- to check out the capability of the launch escape system to separate the command module from the booster.

With the addition of the two, General Dynamics will build a total of six vehicles for the Apollo test program. The new boosters will differ from the original four in that they will contain attitude control systems and instrumentation to analyze the control systems.

NASA already has flown one of the solid-fueled Little Joe II's. On August 28, 1963, a booster with a dummy Apollo payload was launched successfully on a ballistic flight. One one malfunction occurred during the flight. A signal designed to terminate the thrust was transmitted, but the motors did not shut down.

Add 1
MSC 63-223

The flight's purpose was to verify the performance of the Little Joe II vehicle during powered flight prior to employing it to test boilerplate versions of the command module.

The next White Sands test will not utilize a Little Joe II, but investigate the dynamics of the Apollo escape system in an off-the-pad firing.

Next test using the all-solid fuel vehicle is designed to check out the launch escape system at medium altitudes where dynamic pressures on the command module are great. A back-up vehicle is planned for this test.

Little Joe II is 154 inches in diameter and stands 29 feet tall. It is made up of two sections, the upper section is 19 feet high and the lower is ten feet. Four 50-square foot fins are attached at the base of the vehicle.

An Algol motor, made by Aerojet-General, and six Thiokol Recruit motors generate a total thrust of 310,000 pounds. The Algol, producing 103,200 pounds of thrust, serves as the sustaining motor. The recruits serve as short duration boosters providing high thrust to supplement the sustaining motor.

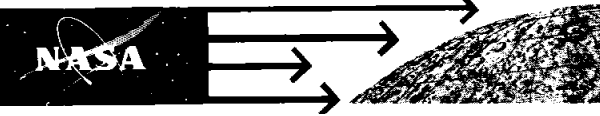
Thrust requirements vary for future flights. The Algol and Recruits can be combined to provide up to 735,000 pounds of thrust.

MSC and General Dynamics/Convair signed a definitive contract valued at \$6,332,643.00 on February 18, 1963. The cost-plus-fixed-fee contract called for boosters, launchers, ground operations support systems and documentation.

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNNED SPACECRAFT
CENTER



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-224
November 5, 1963

HOUSTON, TEXAS -- The NASA Manned Spacecraft Center has accepted the final items of a vibration environment test system from the Electronics Division of Ling-Temco-Vought, Inc., under terms of a \$237,000 contract.

The system includes a 10,000 pound shaker, two thrusters each with 10,000 pounds force, a power amplifier and a control console. MSC uses the vibration equipment to test spacecraft parts.

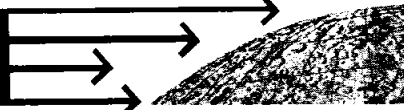
The system came from LVT's Anaheim, California plant. It was developed for MSC's Systems Evaluation Development Division.

dg

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNNED SPACECRAFT
CENTER



Houston
1, Texas

WAlnut 8-2811
Extension 3751

MSC 63-225
November 5, 1963

HOUSTON, TEXAS -- NASA Manned Spacecraft Center has awarded a \$183,152.00 fixed price contract to Wyle Laboratories, Huntsville, Alabama to build a king-size noise maker to be used at the Center's Clear Lake site.

The noise making devices, called high intensity acoustic equipment, will be used to test reaction of spacecraft parts to adverse noise encountered in flight.

Included in the sound making apparatus will be a noise generator, an impedance device, a reverberation chamber, energy source and control panels. The entire facility will fill an area approximately 50 feet long by 20 feet wide.

According to terms of the contract, Wyle Laboratories will have 135 days to design, develop, construct and deliver the noise making machinery. The work is being done for MSC's Systems Evaluation Development Division.

Fifty three companies were solicited to submit proposals and five responded.

dg

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT
CENTER

NASA



Houston
1, Texas

Walnut 8-2311
Extension 3751

MSC 63-226
November 8, 1963

Don

HOUSTON, TEXAS -- An advance notice of an invitation to bid on construction of a Vibration Test Laboratory at the NASA Manned Spacecraft Center here has been mailed to contractors.

Builders have been invited by the Corps of Engineers, Fort Worth District, to submit proposals on construction have an approximate value of \$1, 500, 000.

The laboratory will have approximately 13, 700 square feet and will contain 1) a general vibration test area 42 feet in height, 2) a spacecraft vibration test area about 115 feet tall and 3) a second story for offices, shops and control rooms.

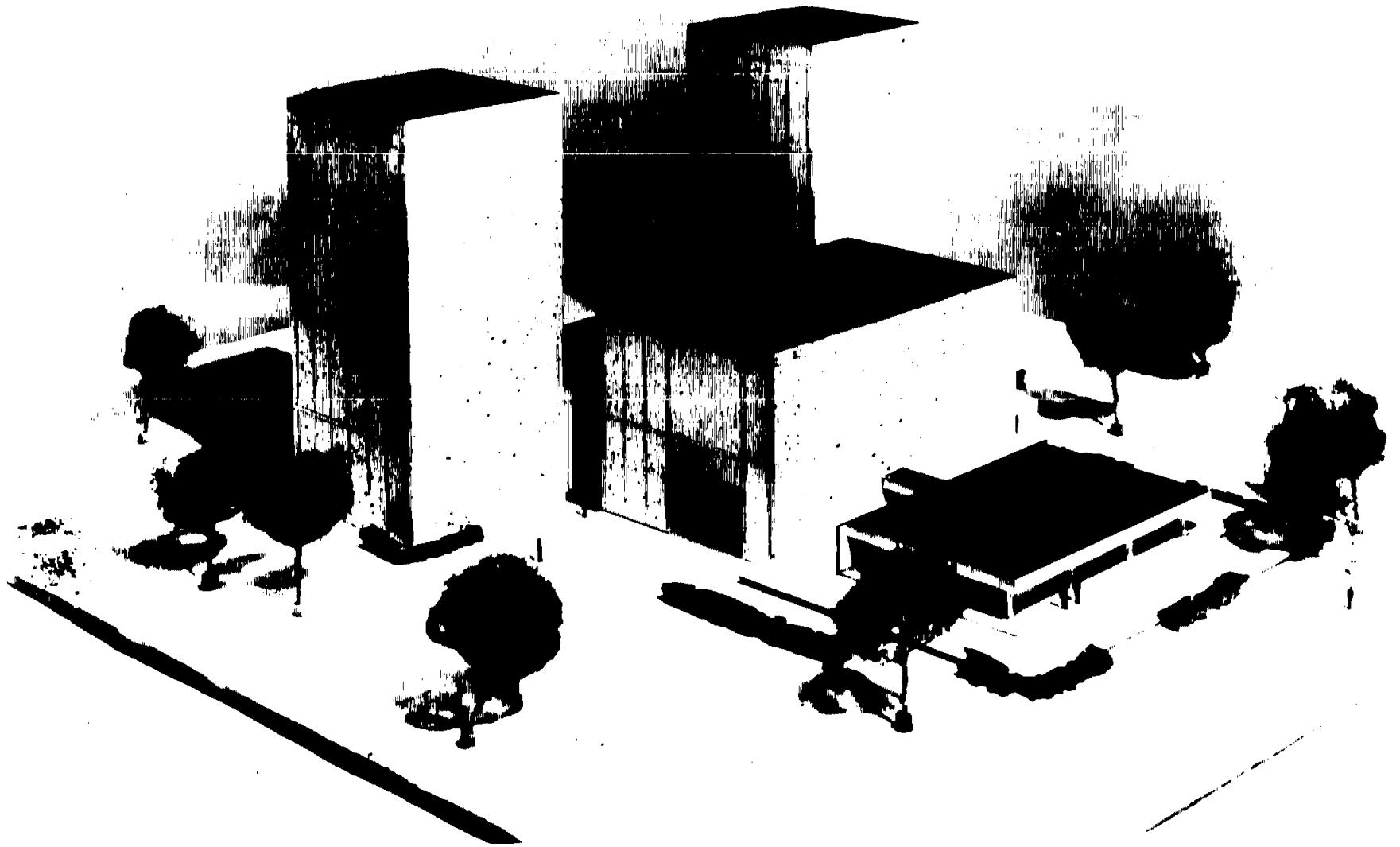
The Corps of Engineers told contractors that the formal issuance of notice to bid will be made December 10, with the opening of bids on or about January 9, 1964. Contract will be for nine months.

Prime contractors are required to submit to a pre-qualification review to be eligible to bid on the work, the Corps said. Data for pre-qualification review must be submitted to the Corps' Fort Worth office by November 26.


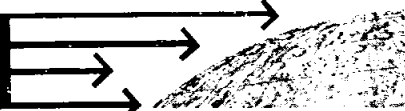
A joint venture formed by contractors for the purpose of bidding on the proposed construction will be considered, providing other requirements are met.

The Corps also disclosed that firms interested as subcontractors or suppliers need not be pre-qualified in order to furnish their bids to the prime contractor.

NASA
S-63-14408



NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
MANNED SPACECRAFT CENTER   **Houston
1, Texas**

MSC 63-227
November 5, 1963
FOR IMMEDIATE RELEASE

HOUSTON, TEXAS - Reorganization of the Manned Spacecraft Center, aimed at strengthening the Apollo Spacecraft and Gemini program management structure, has been announced by Dr. Robert R. Gilruth, MSC Director.

Under Dr. Gilruth and Deputy Director James C. Elms, MSC has been re-grouped into seven major functions headed by four assistant directors, the managers of the major programs, and the manager of MSC Florida Operations.

Under the new structure, personnel who performed the highly successful Mercury flight program are being reassigned to support the Apollo and Gemini programs. This provides a means of assuring that Mercury experience will effectively be brought to bear on the Apollo and Gemini programs. Two new Assistant Directorships have also been established to emphasize the input of the operations area and flight crews into the Apollo and Gemini Programs. The Assistant Director for Flight Operations and the Assistant Director for Flight Crew Operations are the two new Assistant Directors established under the reorganization. The new organization also combines under one assistant directorship the offices of the Assistant Director for Engineering and Development, and the Assistant Director for Information and Control Systems. This expanded assistant directorate will have responsibility for performing subsystem engineering and for monitoring MSC contractual operations in subsystem engineering.

The new Manned Spacecraft Center organization reduces the number of offices reporting directly to the top management from sixteen to twelve, and more effectively groups key line and staff functions.

The direct in-put of flight crews into development of spacecraft systems through an assistant director is assured, as well as the direct contribution of Mercury program experience to the two follow-on missions.

Under its new manager, Dr. Joseph F. Shea, and deputy manager Robert O. Piland, the Apollo Spacecraft Program Office will be reorganized into five functional units. These are the offices of Program Control, Systems Engineering, Test, Flight Operations, and Reliability. In addition, the positions of manager, Lunar Excursion Module; manager, Command and Service Module; and manager, Guidance and Navigation, have been retained.

Charles W. Mathews, who has been acting manager of the Gemini Program Office, has been named Gemini Program manager. Serving as deputy manager, Gemini Program Office, will be Kenneth S. Kleinknecht. Kleinknecht, former manager of Mercury Project, brings to the Gemini program his extensive experience within NASA in the management of project activities.

Maxime A. Faget will continue as assistant director for Engineering and Development, with George Barry Graves serving as deputy assistant director in the new enlarged engineering organization. Aleck C. Bond has been named manager, Systems Test and Evaluations in the assistant director's office.

Engineering and Development divisions include Guidance and Control - Faget, acting chief; Structures and Mechanics - Joseph N. Kotanchik, chief;

Crew Systems - Richard S. Johnston, chief; Instrumentation and Electronics Systems - Graves, acting chief; Advanced Spacecraft Technology - William E. Stoney, Jr., chief; Computation and Data Reduction - Eugene H. Brock, chief; and Propulsion and Energy Systems - Bond, acting chief.

Christopher C. Kraft, Jr., former head of the Flight Operations Division, will become the new assistant director for Flight Operations. The three divisions under his direction will be Flight Control - John D. Hodge, chief; Mission Analysis - John P. Mayer, chief; and Recovery Operations - Robert F. Thompson, chief. Kraft has served as chief flight controller on the successful Mercury manned flights.

Flight Crew Operations activities have been consolidated under a new assistant directorship. Major Donald K. Slayton, one of the original seven NASA astronauts and formerly chief of Astronaut Activities, has been named to the new position of assistant director for Flight Crew Operations. He will also serve as chief of the Astronaut Office. Other offices reporting to Slayton are Aircraft Operations Office - Joseph Algranti, chief; and Flight Crew Support Division - Warren J. North, chief. Major Slayton has resigned from the Air Force to accept a permanent civilian appointment with Manned Spacecraft Center.

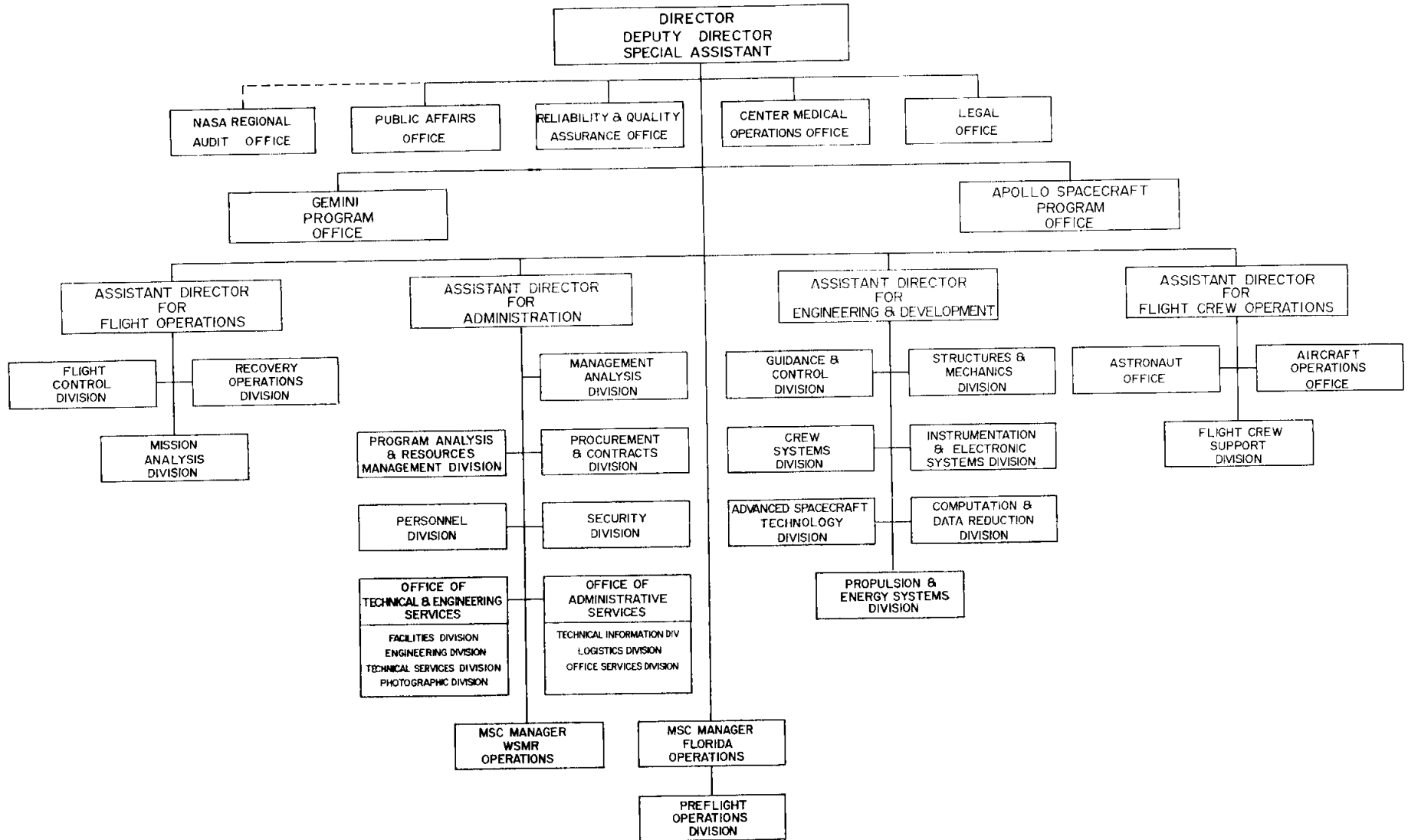
Wesley L. Hjernevik, Assistant Director for Administration, will continue in that position; and Philip H. Whitbeck will continue as Deputy Assistant Director. Hjernevik will continue to be responsible for providing all administrative and technical service support for Manned Spacecraft Center. In addition, the MSC White Sands Missile Range Operations Office,

Wesley E. Messing, manager, will report directly to the Assistant Director for Administration.

Hjornevik will supervise the Personnel, Procurement and Contracts, Management Analysis, and Security Divisions; and the Office of Technical and Engineering Services, and Office of Administrative Services. Chiefs of these divisions remain unchanged.

Staff offices reporting to the Director's Office will be the Center Medical Operations Office, Legal Office, Reliability and Quality Assurance Office, and the Public Affairs Office.

MANNED SPACECRAFT CENTER ORGANIZATION CHART



APPROVED: *James E. Webb*
 ADMINISTRATOR, NASA
 DATE: *1/17/63*

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNNED SPACECRAFT
CENTER



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-228
November 8, 1963

HOUSTON, TEXAS -- Margaret Catherine Hill, of 2740 Gentry Drive, Wichita, Kansas, was one of three winners in the Science Youth Regional Congress held at the Manned Spacecraft Center recently under the joint sponsorship of the National Aeronautics and Space Administration and the National Science Teachers Association.

Miss Hill, a senior at Wichita High School East, presented a paper on a study to determine the location of gibberellin-like hormones in higher plants. Judging the presentation were scientists and engineers from MSC and NSTA members.

Other winners were Robert Moore, a senior at Central High School, Little Rock, Arkansas and Gerald Serwer, a senior at Harding School, Oklahoma City, Oklahoma.

Moore presented a study on the effects of cold exposure on frogs and Serwer's paper reviewed electrocardiographic development of the chick embryo heart.

Three alternates also were named. They are Mary K. Malins, Corpus Christi, Texas; Sandra K. Tomlin, Kingsville, Texas and Jose Olivarez of Mission, Texas.

Add 1
MSC 63-228

The three winners will compete against outstanding students selected from similar regional congresses in finals to be held at NASA Headquarters in Washington, D. C. In the event one of the winners is unable to be present, his place will be taken by an alternate.

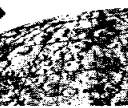
Regional congresses were held in ten different NASA Centers. MSC was responsible for an area covering eight states. The purpose of the congress is to stimulate the interest of talented secondary school boys and girls in space sciences.

dg

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNNED SPACECRAFT
CENTER



**Houston
1, Texas**

Walnut 8-2811
Extension 3751

MSC 63-229
November 8, 1963

HOUSTON, TEXAS -- Gerald A. Serwer, of 3916 Harvey Parkway, Oklahoma City, Oklahoma, was one of three winners in the Science Youth Regional Congress held at the Manned Spacecraft Center recently under the joint sponsorship of the National Aeronautics and Space Administration and the National Science Teachers Association.

Serwer, a senior at Harding High School, presented a study on electrocardiographic development of the chick embryo heart. Judging the presentation were scientists and engineers from MSC and NSTA members.

Other winners were Margaret Catherine Hill, a senior at Wichita High School East, Wichita, Kansas and Robert Moore, a senior at Central High School, Little Rock, Arkansas.

Miss Hill presented a paper on a study to determine the location of gibberellin-like hormones in higher plants and Moore's paper was a study on the effects of cold exposure on frogs.

Three alternates also were named. They are Mary K. Malins, Corpus Christi, Texas; Sandra K. Tomlin, Kingsville, Texas and Jose Olivarez of Mission, Texas.

Add 1
MSC 63-229

The three winners will compete against outstanding students selected from similar regional congresses in finals to be held at NASA Headquarters in Washington, D. C. In the event one of the winners is unable to be present, his place will be taken by an alternate.

Regional congresses were held in ten different NASA Centers. MSC was responsible for an area covering eight states. The purpose of the congress is to stimulate the interest of talented secondary school boys and girls in space sciences.

dg

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT
CENTER



**Houston
1, Texas**

Walnut 8-2811
Extension 3751

MSC 63-230
November 8, 1963

HOUSTON, TEXAS -- Robert Moore, of 1820 South Taylor Street, Little Rock, Arkansas, was one of three winners in the Science Youth Regional Congress held at the Manned Spacecraft Center recently under the joint sponsorship of the National Aeronautics and Space Administration and the National Science Teachers Association.

Moore, a senior at Little Rock Central High School, presented a paper on a study on the effects of cold exposure on frogs. Judging the presentation were scientists and engineers from MSC and NSTA members.

Other winners were Gerald Serwer, a senior at Harding High School, Oklahoma City, Oklahoma and Margaret Catherine Hill, a senior at Wichita High School East, Wichita, Kansas.

Serwer presented a study on electrocardiographic development of the chick embryo heart and Mill Hill's paper was a study to determine the location of gibberellin-like hormones in higher plants.

Three alternates also were named. They are Mary K. Malins, Corpus Christi, Texas; Sandra K. Tomlin, Kingsville, Texas and Jose Olivarez of Mission, Texas.

The three winners will compete against outstanding students selected from

Add 1
MSC 63-230

similar regional congresses in finals to be held at NASA Headquarters in Washington, D. C. In the event one of the winners is unable to be present, his place will be taken by an alternate.

Regional congresses were held in ten different NASA Centers. MSC was responsible for an area covering eight states. The purpose of the congress is to stimulate the interest of talented secondary school boys and girls in space sciences.

dg

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT
CENTER



**Houston
1, Texas**

Walnut 8-2811
Extension 3751

MSC 63-231
November 12, 1963

HOUSTON, TEXAS -- Jose Olivarez, of 804 St. Marie Street, Mission, Texas, was one of three alternate winners in the Science Youth Regional Congress held at the Manned Spacecraft Center under the joint sponsorship of the National Aeronautics and Space Administration and the National Science Teachers Association.

Olivarez, a senior at Mission High School, presented a paper on astrophysical studies of Jupiter's great red spot.

The regional congress was one of ten held at NASA Centers over the United States. Three winners were named at each of the regional meetings. They will compete in finals to be held at NASA Headquarters in Washington, D. C. In the event one of the winners is unable to participate in the finals, Olivarez will take his place.

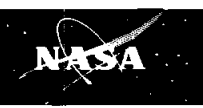
The purpose of the congress is to stimulate the interest of talented secondary school boys and girls in space sciences.

dg

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT
CENTER



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-232
November 12, 1963

HOUSTON, TEXAS -- Sandra K. Tomlin, of 511 West Nettie Street, Kingsville, Texas, was one of three alternate winners in the Science Youth Regional Congress held at the Manned Spacecraft Center under the joint sponsorship of the National Aeronautics and Space Administration and the National Science Teachers Association.

Miss Tomlin, a senior at H. M. King High School, presented a paper on the influence of the solute to solvent mole ratio.

The regional congress was one of ten held at NASA Centers over the United States. Three winners were named at each of the regional meetings. They will compete in finals to be held at NASA Headquarters in Washington, D. C. In the event one of the winners is unable to participate in the finals, Miss Tomlin will take his place.

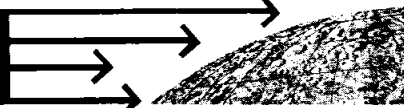
The purpose of the congress is to stimulate the interest of talented secondary school boys and girls in space sciences.

dg

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT
CENTER



**Houston
1, Texas**

Walnut 8-2811
Extension 3751

MSC 63-233
November 12, 1963

HOUSTON, TEXAS -- Mary K. Malins, of 628 DeForrest Street, Corpus Christi, Texas, was one of three alternate winners in the Science Youth Regional Congress held at the Manned Spacecraft Center recently under the joint sponsorship of the National Aeronautics and Space Administration and the National Science Teachers Association.

Miss Malins, a senior at Incarnate Word Academy, presented a paper on micro-organisms found in Corpus Christi Bay.

The regional congress was one of ten held at NASA Centers over the United States. Three winners were named at each of the regional meetings. They will compete in finals to be held at NASA Headquarters in Washington, D. C.

In the event one of the winners is unable to participate in the finals, Miss Malins will take his place.

The purpose of the congress is to stimulate the interest of talented secondary school boys and girls in space sciences.

dg

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNNED SPACECRAFT
CENTER



**Houston
1, Texas**

Walnut 8-2811
Extension 3751

MSC 63-234
November 12, 1963

HOUSTON, TEXAS -- H. T. Christman, Small Business and Industry Assistance Officer of the Procurement and Contract Division at the NASA Manned Spacecraft Center, will address delegates to the Aviation Distributors and Manufacturing Association Conference November 20 at the Shamrock Hilton Hotel.

Christman's speech is entitled "Economic Impact of the Manned Lunar Expedition."

As industry assistance officer at MSC, he contacts corporation executives and representatives acting as a business liaison between the space agency and aerospace companies on matters pertaining to space.

Prior to joining MSC, he directed the procurement for all foreign subsidiaries for Reynolds International, Inc. in Bermuda. He was a general purchasing agent for Air Products and Chemical Company, Allentown, Pa. and supervised production practices for Rodale Manufacturing Company, of Emmaus, Pa.

Christman is a member of the National Association of Purchasing Agents.

He attended Pennsylvania State University as a mining engineering student.

He is married and the father of two children.

dg

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNNED SPACECRAFT
CENTER



**Houston
1, Texas**

Walnut 8-2811
Extension 3751

MSC 63-235
November 12, 1963

HOUSTON, TEXAS -- NASA Manned Spacecraft Center has asked for bids by December 1 on a new compact measuring beacon that will tell searchers exactly how far they are from a spacecraft that has returned to earth.

The request, which was mailed recently to 39 aerospace companies, called for a beacon that weighs ten pounds and will displace no more than 300 cubic inches of ea in the spacecraft.

The beacon will have a minimum output of 300 watts power and is to be compatible with distance measuring (DM) or tactical air control and navigation (TACAN) beacons found on military search aircraft. DM and TACAN contains equipment which permits computation of distance in miles.

Previous spacecraft beacons transmitted signals on which search craft could home, but there were no provisions for calculating distance.

Delivery schedule calls for preliminary design with 60 days after the notice of ward of contract and completion of an operational model for testing within four months after the contract.

The beacon is to be constructed for MSC's Flight Operations Division.

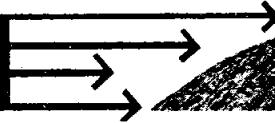
dg

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNEED SPACECRAFT
CENTER

NASA



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-236
November 13, 1963

HOUSTON, TEXAS -- In a request for proposals for a vibration system, Manned Spacecraft Center has instituted new procurement methods designed to provide products of higher quality at prices more favorable to the Government.

The proposed procurement is being made under a Two-Step Formal Advertising method. In former procurement actions, MSC frequently requested industry to submit its proposals in one document covering the technical and business management aspects of the problem.

Step One of the new method calls for proposals covering technical detail only. No cost information is to be incorporated. The offeror also may submit multiple proposals presenting different solutions to the problem. Each proposal will be evaluated and the bidder notified of its acceptability.

In the second step, companies found to be technically acceptable will be invited to submit another proposal. A formal invitation for bid will go out to them. Contract award will be made to the lowest responsible bidder, MSC procurement officials said.

- more -

The space center also asked companies to include in their technical proposals information on:

- a. past experience, skills and the competence to accomplish the work,
- b. a resume of the experience of the personnel who will conduct the work,
- c. a description of work currently underway, and
- d. information on past experiences and performances.

The successful contractor also will have to tell the space agency if he contemplates subcontracting any of the work; what internal priority he will assign to the job; how many people he employs and will it be necessary to use overtime.

Procurement officials say the two-step method provides all the advantages of competition while at the same time permitting them to retain the right to select the company with the best solution to the problem.

It clears areas of doubt between industry and government before the actual award of contract, they add, and it provides a degree of flexibility in contractor selection that cannot be readily achieved in the one step formal advertising method.

The proposal to be submitted by November 26, 1963, called for a vibration system capable of delivering between eight and 10,000 pounds of force. It will consist of a control console, power amplifier, table top shaker, cooling unit, auxiliary equipment as required and a spare parts kit.

A fixed price contract is contemplated. Delivery of the hardware is called for within 120 days of receipt of contract award.

The system is being built for MSC's Instrumentation and Electronics System vision.

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNNED SPACECRAFT
CENTER



**Houston
1, Texas**

WAlnut 8-2811
Extension 3751

MSC 63-237
November 13, 1963

HOUSTON, TEXAS -- The NASA Manned Spacecraft Center today awarded a contract valued at \$80,000 to Security Guard Services, Inc., of El Paso, Texas for security protection services at the space agency's White Sands Missile Range facilities.

Contract will be in force for one year from October 31, 1963 and will be executed in New Mexico.

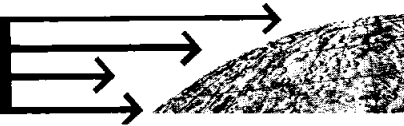
A total of 31 small business firms were asked to submit proposals and 14 responded with bids.

dg

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNNED SPACECRAFT
CENTER



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-238
November 14, 1963

HOUSTON, TEXAS -- An operations team from the NASA Manned Spacecraft Center has completed a study at Ling-Temco-Vought, Inc. in Dallas to determine whether man can accomplish spacecraft rendezvous should some of his electronic devices fail and he has to rely on a combination of pilot skill and his spacecraft radar.

The verdict: he can. Findings represent an important safety factor for space programs where rendezvous is required.

In the lunar program, the Command and Service Module and the smaller Lunar Excursion Module (LEM) will be placed into lunar orbit together. The LEM with two space pilots aboard will detach from the Command Module, make the actual landing on the moon and later launch to a rendezvous with the still orbiting Command Module. Rendezvous is essential to mission success.

For Apollo, the astronauts' spacecraft will have automatic guidance and navigation equipment and the pilots will receive a wealth of information from ground-based tracking and computing stations. But to assure highest probability of mission success MSC wanted to know whether man could make his rendezvous using only pilot know-how and the LEM's simple radar.

Add 1
MSC 63-238

For study purposes, it was assumed that certain guidance and navigation equipment became inoperative either on the moon or during the powered descent to its surface. Simulated flight tasks performed using radar as the primary sensing device included ascending from the lunar surface, injecting into orbit, circularizing the orbit, adjusting orbit altitude, changing the orbital plane to agree with that of the Command Module and making midcourse guidance corrections.

Time after time astronauts who participated in these experiments were able to rendezvous with the Command Module relying on LEM radar information.

Director of the experiment was Paul C. Kramer, technical assistant to the chief of the Flight Crew Support Division at MSC.

Kramer pointed out that if man can use his own ability to supplement automatic guidance and navigation equipment, simple and reliable back up systems can be designed. This in turn will allow greater mission flexibility and higher chances of mission success.

The program was conducted under a four-month contract between MSC and Ling-Temco's Astronautics Division. The space agency used LTV's flight simulator -- a computer directed maneuvering device to simulate the numerous phases of the mission. Laboratory for Electronics, Inc. of Boston conducted a study from which the radar characteristics were used in the simulation work. The LFE study involved estimating mathematical models for determining degree of error in the radar.

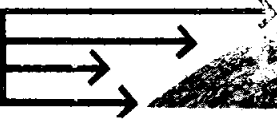
Astronauts participating in the experiments included Scott Carpenter, Neil A. Armstrong, James A. McDivitt and Elliott M. See, Jr.

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT
CENTER

NASA



Houston
1, Texas

WAicut 8-2811
Extension 3751

MSC 63-239
November 14, 1963

HOUSTON, TEXAS -- Industry has been requested by the NASA Manned Spacecraft Center to submit proposals leading to a fixed-price call order contract for computer programming and operating services.

Four general areas of work are contemplated in this proposal. They are.

- a) preparation of a program to handle management and engineering problems
- b) modification of existing programs
- c) operation of equipment to produce summary reports
- d) preparation of data from coded information supplied by the Government

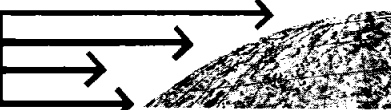
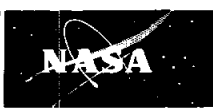
The period of the contract is expected to run for 12 months from November 30, 1963. It will be done for MSC's Computation and Data Reduction Division. The space agency asked that the proposal be submitted by November 15 in two parts -- one covering technical work and the other, cost.

Work will be done at Clear Lake and Ellington Air Force Base.

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT
CENTER



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-240
November 18, 1963

HOUSTON, TEXAS -- Dr. Robert B. Voas, Assistant for Human Factors to the Director of the Manned Spacecraft Center, will address delegates to the Key Club regional meeting November 24 in Athens, Ohio.

Voas' speech, entitled "Goals for the Space Age," will review skills and knowledge sought in young persons for participation in the space flight program.

Voas joined the National Advisory Council for Aeronautics (predecessor of the National Aeronautics and Space Administration) in October, 1958 and assisted in the selection of the original group of astronauts.

Dr. Voas worked with engineers who have designed and developed the simulators on which the astronauts were trained to fly the Mercury spacecraft. He also was instrumental in drawing up training programs for space pilots.

In his present position, he assists the Director of MSC in biomedical problems relating to space flight. He participated as a member of the debriefing team who interviews space pilots immediately after their flight.

Dr. Voas was born in Evanston, Illinois in 1928. He holds bachelor of arts, master of science and a PhD in psychology from the University of California in Los Angeles. In addition he holds a bachelor of philosophy degree from the University of Chicago.

- more -

Add 1
MSC 63-240

Prior to his separation from active service with the United States Navy, Dr. Voas reached the commissioned rank of lieutenant. During Navy service he was a flight observer amassing about 300 hours in jet aircraft.

He is a member of the National Science Honorary Society, American Rocket Society, Human Factors Society of America, and the American Psychological Association.

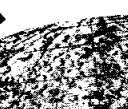
Voas is married and the father of two children.

dg

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNNED SPACECRAFT
CENTER



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-241
November 18, 1963

HOUSTON, TEXAS -- Cummins and Reed, Texas City architects, today were awarded a contract to design six guard stations and an access road at the NASA Manned Spacecraft Center's Clear Lake site.

The contract, in the amount of \$4,400, calls for plans, specifications and a cost estimate for the work. The road runs from a parking lot to the Center headquarters building and the guard stations are to be located strategically over the site.

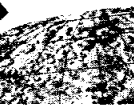
The work is to be done for MSC's Facilities Division.

dg

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT
CENTER



**Houston
1, Texas**

Walnut 8-2811
Extension 3751

MSC 63-242
November 21, 1963

HOUSTON, TEXAS -- Mrs. Louise Brown, Manned Spacecraft Center Personnel Administration office, gives the oath to Donald K. Slayton, one of the original Mercury astronauts, who resigned his Air Force commission as a major Wednesday to accept appointment under Civil Service as Assistant Director for Flight Crew Operations at Manned Spacecraft Center.

###

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION



Walnut 8-2811
Extension 3751

MSC 63-243
November 25, 1963

HOUSTON, TEXAS -- The chances of the average person ever being hit by a meteorite are pretty slim, but if it ever happens to you, send the object to Manned Spacecraft Center's Lunar Surface Technology personnel in Houston, Texas, and they will tell you what hit you.

Of course, the space center scientists have an additional objective beyond merely doing you a favor. Their job is to learn as much as possible about the surface of the moon in preparation for the first U. S. manned landing on the moon, the goal of the Apollo Spacecraft Program Office at Manned Spacecraft Center.

Among other research avenues being followed by the lunar surface technologists, headed by John Dornbach, they are investigating properties of extraterrestrial objects which survive entry into the Earth's atmosphere and which might have come from the moon.

If you find a meteorite, even though it didn't hit you as it came out of the skies, the lunar surface investigators are still interested in studying it. The object of these studies is to help American astronauts learn as much as possible about the

- more -

ld 1
MSC 63-243

moon's surface, either fact or reasonable scientific conjecture, so they will be able to recognize and report on the lunar surface environment when they arrive.

At the present time this branch of MSC is extremely interested in acquiring new specimens for examination. Upon receipt of a meteorite sample (about one or two ounces is ample) the branch personnel will test and inform the contributor of the type meteorite and its composition.

Characteristically, meteorites are always solid, usually with an irregular shape and heavy for their size. They are black or brown on the outside, and most show metallic iron when ground on a clean carborundum surface.

Most mineralogists dream of being able to examine a "new" meteorite within a week or ten days after it falls, to check for high energy radiation effects.

Elbert A. King, aerospace technologist, is presently studying samples taken from the 121 pound Rosebud meteorite (very fine hypersthene chondrite). The exceptionally well-preserved specimen is on loan from the University of Texas, Department of Geology.

Discovered near Rosebud, Texas in Milam County about 1907, the meteorite was used for a time as a hitching stone in front of a drug store in Rosebud.

Presented to the University of Texas in 1915 by Capt. J. W. Waters, the initial descript and petrographic analysis of the specimen was made by Professor Fred M. Bullard of the University.

New analytical techniques have been developed since that time and mineralogists like King are able to make many new discoveries heretofore unknown.

Add 2
MSC 63-243

Two sample cores were taken from the Rosebud meteorite for petrographic examination. Sections of the specimen are examined through the use of X-ray defraction and X-ray florescent analysis and much can be learned about the composition and possible uses for the rock in relation to the needs of man in a space environment such as the moon or other planets.

The Rosebud meteorite is unique in that it has an exceptionally well-preserved ablation surface.

There are only about 1500 known meteorites in scientific collections in the entire world.

###

November 26, 1963

Manned Spacecraft Center was established as Space Task Group by the National Aeronautics and Space Administration at Langley Field, Virginia, November 5, 1958, and assigned the management responsibility for Project Mercury.

The immediate problems facing the new organization were

- . To investigate man's capabilities in the space environment, and
- . To develop, concurrently, manned space flight technology for use as a basis for conducting much more ambitious undertakings, including manned exploration of space and the planets.

At the outset, it was necessary for Space Task Group to determine the configuration of the spacecraft for Project Mercury, to select a family of launch vehicles, to select a pool of pilots to be trained for manned space flights, to set up a training program for these pilots and ground support personnel, and a myriad of other activities, all of which were important to the ultimate success of the program.

It was necessary to imbue in all the many contractor members of the team the knowledge and feeling of responsibility that 100 per cent reliability was a basic requirement in all the thousands of spacecraft components.

Additional pressure was placed on the group on May 25, 1961, when the late President John F. Kennedy told the Congress that landing Americans on the moon and returning them safely to earth during the 1960's was a national goal.

Early in 1962, the Gemini Project Office and Apollo Project Office were established and work was started at an accelerated pace on the two

follow-on projects to Mercury - Gemini, the two-man spacecraft to be used for extended earth orbit missions up to two weeks in duration and to carry out rendezvous and docking experiments; and Apollo, the three-man spacecraft to be used for extended earth-orbital, trans-lunar, and lunar landing missions.

Project Mercury was completed in 1963 after a perfect record of manned suborbital and orbital flights. Highlights of that flight program follow:

- . May 5, 1961 - Astronaut Alan B. Shepard Jr. was the first American in space. On that day he flew a suborbital mission, lasting about 15 minutes, in his "Freedom 7" spacecraft.

- . July 21, 1961 - Astronaut Virgil I. Grisson, in his "Liberty Bell 7" spacecraft, flew the second and final suborbital mission. This flight, too, lasted about 15 minutes.

- . February 20, 1962 - The first manned orbital effort of the United States was a success as Astronaut John H. Glenn Jr. flew his "Friendship 7" spacecraft in a three-orbit mission which lasted four hours and 55 minutes. The success of this test showed the need for a human crew in space flights and man's adaptability to the space environment.

- . May 24, 1962 - Astronaut M. Scott Carpenter duplicated Glenn's three-orbit flight in his "Aurora 7" spacecraft in a flight which lasted four hours and 56 minutes. This test verified observations of previous flights and added space science information.

- . October 3, 1962 - Astronaut Walter M. Schirra Jr. flew a six-orbit mission in his "Sigma 7" spacecraft. This test, which lasted nine hours and 13 minutes provided additional information concerning man's capabilities in the space environment and proved that the engineering concepts of the spacecraft and supporting systems were accurate.

. May 15-16, 1963 - The final manned space flight of Project Mercury was accomplished on those days when Astronaut L. Gordon Cooper Jr., in his "Faith 7" spacecraft completed a 22-orbit mission which lasted 34 hours and 20 minutes. During this flight Cooper became the first American astronaut to sleep in space, and had time for additional experiments not tried on other flights because of engineering requirements.

The suborbital missions utilized Redstone boosters as launch vehicles and modified Atlas missiles were used as launch vehicles on all the orbital missions.

Scientific observations and experiments carried out during Project Mercury's manned space flights increased progressively in number and scope as periods of space flight were extended. Special materials and equipment were added to those required for spacecraft operation and monitoring the physical condition of the pilot beginning with Glenn's flight, when a series of experiments were initiated to study scientific aspects of terrestrial space and space flight.

All the pilots reported that weightlessness was a pleasant sensation and offered little difficulty ~~with the~~ with the exception of bits of food floating around during early flights and realizing that, while in a weightless state, they could release a piece of equipment they were working with and it would remain suspended where released.

One of Glenn's biggest surprises occurred as he came out of the night side on his first pass and found the spacecraft surrounded by luminous particles which he reported as yellowish-green. These particles, he said, made it seem that the spacecraft was moving through a field of fireflies.

Carpenter reported after his flight that he also had seen the particles but they appeared like snowflakes to him. He believed they were not truly

luminous but reflected sunlight. Carpenter also reported that he inadvertently hit the hatch at dawn on his third pass and that a cloud of the particles flew by the window, and that after this, each time he knocked on the hatch or a portion of the spacecraft wall, the particles came by the window. The particles, thought to be ice crystals formed from the steam released by the life support system, were also observed by Schirra and Cooper.

The experiments conducted during Project Mercury can be grouped into several areas of study. These areas are: (1) visual acquisition and perception experiments, (2) general photographic experiments, (3) radiation experiments, and (4) several miscellaneous experiments and studies which included investigations of fluid behavior under zero-gravity conditions and of the characteristics of various ablative materials under reentry conditions.

In the first category, ground light experiments were attempted on all four of the orbital flights to provide information on man's ability to acquire a fixed light source against an earth background. On the flights of Glenn, Carpenter and Schirra the experiments were not successful because of heavy cloud cover. During the last Mercury flight, Cooper was able to observe the xenon light positioned at Bloemfontein, South Africa, on his sixth pass.

In addition, a flashing light was ejected from the spacecraft and viewed by Cooper at varying distances in space. The light, its container and the ejection mechanism were built by the NASA Langley Research Center. The flashing-light unit was a 5.75-inch diameter spherical assembly, weighing about 10 pounds and equipped with two xenon-gas-discharge lamps located at opposite poles. The two lamps flashed simultaneously at a rate

of approximately one signal per second.

Horizon-definition photography was conducted on two Mercury flights to assist the Instrumentation Laboratory of Massachusetts Institute of Technology in determining the effectiveness with which the earth's sunlit limb could be used for navigational sighting during the final phase of advanced space missions.

Weather photography and observations were carried out during the Mercury flight program to augment other meteorological information and to provide specific information that might be useful in designing advanced weather satellite systems.

Terrain photographs have been a part of the general purpose photographs on each of the four manned orbital missions. They were, however, only specifically planned for Schirra's flight, while on the other three flights they were taken as the opportunity presented itself. These photographs were taken to aid in building up a catalog of space photographs of various geological features such as folded mountains and volcanic fields, and to provide topographical information over a major portion of the earth's surface.

The experiments conducted in the other categories were highly technical in nature.

All of the many facets of Project Mercury, from the selection of the spacecraft configuration and the family of launch vehicles, through the selection of pilots and the ultimate success of the six missions have materially contributed to the major tasks which lie ahead - a lunar landing and the eventual exploration of space and the planets.

File

MSC 63-245
November 26, 1963

Special to the Arizona Journal

With Project Mercury successfully completed NASA's Manned Spacecraft Center is now engaged in an all-out effort in the follow-on programs, Projects Gemini and Apollo.

The extremely capable engineers and support personnel who were assigned to Project Mercury have been reassigned to duties with these two programs and these changes will enhance the progress of both projects.

In addition to the concurrent work on both Gemini and Apollo spacecraft development, there is a great deal of activity in the field of crew training. In addition to the seven Project Mercury astronauts, Manned Spacecraft Center added nine in September 1962, and 14 more in October this year, bringing to 30 the total number of crew members available for future space flights which are programmed to date. Each group has gone through an intensive educational program with emphasis on astronomy, selenology, physics of the upper atmosphere, aerothermodynamics and a number of other subjects. In addition they have toured the facilities and been briefed by the prime contractors in the three spacecraft programs and many of the top-tier subcontractors.

In February of this year specialized assignments were made as follows: Neil Armstrong, to monitor the development, design and use of trainers and simulators, including new training requirements not

Add 1
MSC 63-245

associated with specific mission simulators; Frank Borman, son of Mr. and Mrs. Edwin Borman of Phoenix, concentrates on the booster design and development program with special attention devoted the booster-abort systems and the development of abort-preventing procedures for mission success; Scott Carpenter's specialized assignment is the lunar excursion module (LEM) of the Apollo spacecraft; and Charles Conrad specializes in cockpit layouts, instrument displays and pilot controls, to insure that systems "displays" are appropriate integrated into cockpit panels.

Gordon Cooper's assignment at that time consisted of the pilot phases of Project Mercury; John Glenn was given the general assignment of Project Apollo, the program for manned space flight to the moon; Virgil Grissom was given a similar general assignment on Project Gemini, the program which has rendezvous in space as a major objective; and James Lovell monitors the design and development of all recovery systems such as the paraglider, parachute and LEM landing systems, including resolving operational problems in the reentry and recovery phases of the mission.

James McDivitt's assignment is the design and development of guidance and navigational systems and aids for operational requirements; Walter Schirra in overall operations and training; Elliot See. monitors the design and development of electrical and sequential systems, and aids in the coordination for mission planning; and Alan Shepard, along with Cooper was assigned special duty in the pilot phases of Project Mercury.

Add 2
MSC 63-245

Donald Slayton was named coordinator for astronaut activities and to maintain overall supervision of astronaut duties. In a reorganization announced November 5 by Manned Spacecraft Center, Slayton was named Assistant Director for Flight Crew Operations with full responsibility for the astronaut office, flight crew support division, and aircraft operations office. Thomas Stafford specializes in monitoring the design and development of communications and instrumentation systems, insuring that on-board systems are compatible with pilot needs and properly integrated with the mission control system, ground operational support and other communications links; Edward White monitors the design and development of flight control systems and related equipment; and John Young monitors design and development of environmental control systems, survival gear, pressure suits and other personal equipment.

These specialized assignments require that all the astronauts spend much time away from their Houston headquarters, and, in addition, all are required to take part in many phases of training on simulators, centrifuge, procedures trainers, etc. Each of them is responsible for keeping the rest of the group informed of the changes effected and the progress made in their particular field and, if this is not enough, each must maintain his flying proficiency and physical fitness.

Add 3
MSC 63-245

The 14 astronauts named in October are scheduled to report for work at Manned Spacecraft Center early in February. Present plans call for them to receive an intensive course of study such as the others went through, tour the various facilities and probably about the middle of 1964, there will be a realignment of specialized duties with all 30 of the astronauts following a particular phase or phases of the many facets of design and development of the spacecraft and components of Projects Gemini and Apollo.

In other areas of activity, there are a continuous series of conferences between MSC engineers and management officials and contractor representatives; periodic design engineering inspections at McDonnell Aircraft Corporation, prime contractor for the Gemini spacecraft; and North American Aviation, prime contractor for the Apollo spacecraft; at Grumman Aircraft Corporation, prime contractor for the LEM; and many other meetings to discuss problem areas which are continually cropping up while developing the spacecraft and related systems as new ideas are developed.

Each of the items developed must undergo a series of extensive tests in order to prove their ability to provide the 100 per cent reliability required by NASA. For example, a series of tests are already underway at the White Sands, New Mexico, Missile Range, to prove the aerodynamic

Add 4
MSC 63-245

stability characteristics of the Apollo configuration in an abort situation; investigation of the ability of the escape system to propel the command module to a safe distance during a pad abort; and to determine the proper operation of the escape tower release mechanism, tower jettison motor, and parachute recovery system.

All these activities are a must as Manned Spacecraft Center gears its efforts toward the first Gemini-Titan launch scheduled early in 1964 and the Apollo-Saturn launches to follow. This first Gemini mission will be of the unmanned orbital variety with the primary objective of testing the on-board equipment and systems planned for use in later manned Gemini flights.

File

MSC 63-246
November 26, 1963

Special to the Arizona Journal

What are the future plans for manned space flight activities?

The immediate goals are the completion of Projects Gemini and Apollo. Beyond that are other goals not yet specifically determined but which are currently under study.

Project Gemini is scheduled to provide additional information concerning man's ability in the space environment in flights of up to two-weeks duration, and in later flights in that program to investigate the problems of rendezvous and docking with a target vehicle. Also programmed are such activities as the astronauts opening the hatch and emerging from the spacecraft while attached to a rope in order that they may exercise and gather information about the difficulty of performing certain tasks while actually floating in space at a speed of more than 17,000 miles per hour about 100 miles above the earth's surface.

In accomplishing the rendezvous and docking objectives, the following techniques will be used.

Add 1
MSC 63-246

The target vehicle, Agena D, will be launched into a circular earth orbit about 150 miles above the earth by an Atlas D rocket. The Agena D will be controlled from the ground. About 24 hours later a Gemini spacecraft will be launched by a Titan II into an elliptical orbit about 87 miles from the earth at its nearest point and 150 miles at the apogee of the orbit. This will enable the manned spacecraft to orbit the earth in a shorter time and gradually close in on the target vehicle. The astronauts, when they are within several hundred miles of the Agena D, will make flight directional adjustments to conform with the flight path being followed by the Agena D through use of propulsion units.

When they reach a point 20 miles from the target they will be able to see it and from this point they will be able to complete the rendezvous and docking by visual observation. At this point in space, although travelling at more than 17,000 miles per hour, the speed of the two craft will vary by only several miles per hour, and the pilots will be able to thread the coneshape nose of the Gemini spacecraft into the docking collar of the Agena D, then clamps inside the collar will latch firmly around the Gemini cone and lock the two vehicles together.

At that instant the instrument wires of the two craft will be connected automatically, and with this precision movement the Gemini astronauts will gain control over the Agena D, which until that time, will obey orders only from the ground. The astronauts will then operate both

Add 2
MSC 63-246

both spacecraft as a single vehicle, check out all instruments aboard the Agena D, its rocket engine and other systems. They may, for a time, experiment with changing orbital paths and otherwise test the maneuverability of the Gemini-Agena D configuration.

This work is all in preparation for similar exercises with the Apollo spacecraft configuration in preparation for the eventual moon landing.

Concurrent work is being performed on all the many facets of the development of the Apollo spacecraft configuration and the many component systems.

The Apollo program is a particularly important part of the overall space program in that it provides a significant milestone -- a clearly defined goal -- that of landing Americans on the surface of the moon and returning them safely to earth during this decade.

The program was conceived in late 1959, and by mid-1960, a proposed flight around the moon, termed a circumlunar flight, was announced by the National Aeronautics and Space Administration. An extensive study was conducted by the NASA to determine which of several methods of accomplishing this mission would be most expeditious and, at the same time, offer the greatest reliability. Conclusions reached indicated that the lunar orbit rendezvous would best satisfy these demands.

Add 3
MSC 63-246

Following is basically the events which will occur during the lunar landing mission late in the 1960's - a mission which will be flown only after a series of earth-orbital flights by the Apollo spacecraft configuration to prove the design, insure that all systems are capable, and to insure that all known problems are solved.

Three astronauts will enter the Apollo command module, mounted atop an advanced Saturn launch vehicle at Cape Canaveral. They will be boosted into earth orbit by the first stage of the Saturn which will have seven and a half million pounds of thrust. While circling the earth, the spacecraft will be checked out by the three astronauts on board. At the same time, giant computers located in the Mission Control Center at Clear Lake, Texas, will be checking the spacecraft as though they were flying along with it.

With all systems functioning properly, the astronauts will be ready to begin their second phase of the flight. They will orient the spacecraft configuration to the proper attitude, ignite the remaining launch vehicle engine, attain a speed of more than 25,000 miles per hour, and then literally coast to the vicinity of the moon.

During this trip, the adapter containing the lunar excursion module will be separated from the spacecraft, and, using the control systems onboard, the astronauts will turn the spacecraft around the dock nose-

Add 4
MSC 63-246

to-nose with the LEM. During the coasting flight measurements will be continued both from the spacecraft and from the earth and mid-course directional changes will be effected as necessary.

When the spacecraft arrives in the vicinity of the moon, the astronauts will again use their control system to turn the spacecraft around in order that they may use the engine to slow it down to a speed which will enable them to go into a circular orbit about 100 miles from the moon's surface. While orbiting the moon they will again check out all systems, and, if they are functioning properly, the landing mission will be started.

Two of the three astronauts will transfer from the command module into the LEM, the LEM will be detached, and the descent to the moon will be started by use of the landing engine at the bottom of the LEM. It will go into an elliptical orbit with a path different from that of the mother vehicle but one which will require the same period to circle the moon. When the LEM reaches the ten-mile minimum altitude of its approach orbit, it will be traveling at a speed of 4,000 miles per hour in respect to the surface of the moon. At this time the landing engine will be turned on to slow the LEM down and start the descent to the moon. The power can be so adjusted that the craft will be able to hover about 300 feet above the moon's surface, much like a helicopter hovers over a landing site. The pilots will then choose a landing point and will be able to maneuver horizontally as much as 1,000 feet to the desired point. They will then descend slowly to the surface and land at a speed of less than seven miles per hour.

Add 5
MSC 63-246

After landing, they will first check out the vehicle in preparation for the return flight, then explore in the immediate vicinity. They will observe the surface, make measurements, and collect samples. They will also place instruments on the moon which will continue to make measurements and to radio information to the earth after they have departed.

On the first manned lunar mission the total time spent on the lunar surface will be about 24 hours. It is estimated that about an hour after the ascent from the lunar surface is started the LEM will be quite close to the "mother" spacecraft, and when they are about five miles apart the LEM guidance system will be utilized to bring the two craft closer. When the distance has narrowed to several hundred feet, the two astronauts in the LEM will personally control the vehicle and complete the rendezvous and docking operations.

With this complete, they will reenter the Apollo command module, detach the LEM (which will remain in lunar orbit), and start the return trip to earth.

While Gemini and Apollo are the prime efforts of NASA at this time in the field of manned flights, other programs are under consideration. At the present time there are 14 separate studies being conducted for MSC by various contractors throughout the country.

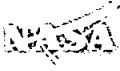
Add 6
MSC 63-246

They concern electrical power systems design for a manned orbital space station; operations and logistics study of manned orbital space station; preliminary design and program definition of a 5-6 man modified Apollo resupply spacecraft for space station support; study of manned Mars excursion module; environmental control and life support systems study for a large manned orbital space station; definition of configurations, preliminary design and program definition of lifting body resupply spacecraft for space station support; and definition of configuration, preliminary design and program definition of a manned rotation space station.

Also definition of configuration, preliminary design and program definition of a zero gravity space station; definition of configuration, preliminary design and program definition of ballistic reentry resupply spacecraft for space station support; study of subsystem requirements for a Mars mission module; life support and environmental control systems study; unmanned lunar probes to be delivered from lunar orbit to the surface of the moon for reconnaissance purposes; and the development, design and fabrication of a four man feeding system for use in extended space station type missions.

###

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNEED SPACECRAFT CENTER  Houston, Texas

MAS-281d
Extension 3575

MSC 63-247
December 2, 1963

HOUSTON, TEXAS - Faith 7, Mercury spacecraft flown by Astronaut L. Gordon Cooper in his earth circling 22 orbit flight last May will be on display December 12 through December 15 in Columbia, South Carolina.

The four day stop in Columbia is the eleventh of 50 state capitol visits that the National Aeronautics and Space Administration has scheduled for Cooper's spacecraft. Close to 1,500,000 persons have already seen the spacecraft since it began its cross country tour in Cooper's home state of Oklahoma.

The NASA Manned Spacecraft Center at Houston, Texas, has set Faith 7 on a stand which permits easy viewing of the inside of the spacecraft. A section of the base of the heat shield and portions of the outer skin have been cut away permitting the first public look at the inner structure of a Mercury spacecraft.

The spacecraft - inside and out - is exactly as it was when it splashed down into the Pacific near Midway Island on May 16, 1963. Nothing has been changed. The spacecraft shingles - its outer skin made of a new metal rene' 41 - shows the effects of the 1,000 degree heat which blanketed the spacecraft during re-entry into earth's atmosphere.

Add 1

MSC 63-~~111~~

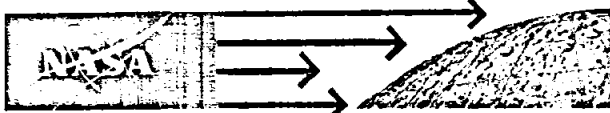
The heat shield - a mixture of glass fibers and resin - at the base of the spacecraft withstood maximum temperatures of 3,000 degrees fahrenheit when Cooper directed Faith 7 on its return to earth.

Also on display with the spacecraft are the cameras Cooper carried and the astronaut Survival Kit which rode on Faith 7's 546,185 mile earth-circling flight. Samples of the food Cooper ate during his day and a half in space will also be on display.

The 13 month tour, ending in the nation's capitol on November 1, 1964 will cover approximately 20,000 miles, a distance Faith 7 covered in space in approximately 80 minutes.

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT CENTER



Houston 1, Texas

WAS-2811
Extension 3575

MSC 63-248
December 31, 1963

HOUSTON, TEXAS - Faith 7, Mercury spacecraft flown by Astronaut L. Gordon Cooper in his earth circling 22 orbit flight last May will be on display January 9 through January 12 in Nashville, Tennessee.

The four day stop in Nashville is the twelfth of 50 state capitol visits that the National Aeronautics and Space Administration has scheduled for Cooper's spacecraft. Close to 1,500,000 persons have already seen the spacecraft since it began its cross country tour in Cooper's home state of Oklahoma.

The NASA Manned Spacecraft Center at Houston, Texas, has set Faith 7 on a stand which permits easy viewing of the inside of the spacecraft. A section of the base of the heat shield and portion of the outer skin have been cut away permitting the first public look at the inner structure of a Mercury spacecraft.

The spacecraft - inside and out - is exactly as it was when it splashed down into the Pacific near Midway Island on May 16, 1963. Nothing has been changed. The spacecraft shingles - its outer skin made of a new metal rene' 41- shows the effects of the 1,000 degree heat which blanketed the spacecraft during re-entry into earth's atmosphere.

Add 1

MSC 63-248

The heat shield - a mixture of glass fibers and resin - at the base of the spacecraft withstood maximum temperatures of 3,000 degrees farenheit when Cooper directed Faith 7 on its return to earth.

Also on display with the spacecraft are the cameras Cooper carried and the astronaut Survival Kit which rode on Faith 7's 546,185 mile earth-circling flight. Samples of the food Cooper ate during his day and a half in space will also be on display.

The 13 month tour, ending in the nation's capitol on November 1, 1964 will cover approximately 20,000 miles, a distance Faith 7 covered in space in approximately 80 minutes.

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNNED SPACECRAFT CENTER  Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-249
November 27, 1963

HOUSTON, TEXAS -- A contract amendment in the amount of \$49,000 has been issued by the NASA Manned Spacecraft Center to the Space and Information Systems Division of North American Aviation, Inc., Downey, California for an extension of a study on modifications to the Apollo spacecraft that may permit it to perform as a space sciences laboratory.

MSC wants to learn if it can adapt the spacecraft for long earth orbital missions. North American was asked to investigate and define concepts evolving from its initial studies, suggesting link-up of modified Apollo vehicles. That is, what happens if two or more modified spacecraft are coupled in space?

The amendment also calls for concepts to establish the maximum number of modules that can be used and it calls for design on either the zero gravity environment or artificial gravity while the stations are in space.

MSC asked for study to investigate whether identical power and environmental systems should be placed on each Apollo module or if one large system could supply

- more -

Add 1

MSC 63-249

all modules. All concepts considered are to be compatible with the Gemini spacecraft as well as with Apollo, the space agency said.

North American's initial study determined man's requirements for protracted space missions and evaluated his physiological capacity to work in space under zero gravity or in an artificial "g" environment. That phase called for an investigation of possible use of the Command module as crew quarters and an investigation of the area occupied by the Lunar Excursion module as a laboratory.

The Apollo spacecraft is now designed for a crew of three. During the lunar mission, LEM will take two of the three members to the surface of the moon. LEM will be left in lunar orbit on the return trip to earth. The Service module likewise will be jettisoned prior to atmospheric re-entry and the Command module with its astronaut crew will be the only piece of spacecraft hardware returning.

North American's study on possible Apollo modifications is to be completed by March 14, 1964.

The study is being conducted for MSC's Advanced Spacecraft Technology Division.

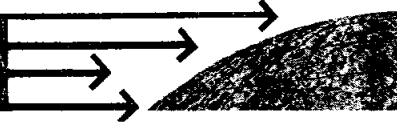
dg

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNNED SPACECRAFT
CENTER

NASA



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-250
December 1, 1963

HOUSTON, TEXAS -- The NASA Manned Spacecraft Center today accepted the Central Data Office Building at the Clear Lake site and certified it as ready for occupancy.

Carrying a \$959,413.00 price tag, the two-story structure will house equipment and personnel of the Computation and Data Reduction and the Technical Information Division.

Scheduled moving date of the 110 data center employees is December 12. They will depart from the leased facilities in Houston at the University of Houston, Rich Building and Veterans Administration. The technical information group, numbering 25, will move from the VA building and Franklin Development complex on December 20.

With the completion of the second major move, some 250 space agency employees will have been relocated at Clear Lake. Earlier the Logistics Division was moved, as well as elements of the electronics, facilities, security and contracts divisions.

- more -

Add 1
MSC 63-250

The Central Data building contains more than 60,000 square feet of space. It consists of digital and analog machine rooms, service area, fireproof storage areas and offices. Prime contractors for the building are W. S. Bellows Construction Corporation of Houston and Peter Kiewit Sons Company of Omaha, Nebraska.

To date 11 facilities have been certified as operational or ready for occupancy. Included are the Translation & Docking Simulator Facility; support offices, shops and warehouses; the fire station and utility plants.

The big move from the 14 leased buildings will take place between February 28 and March 23, 1964. At that time, over 2,500 employees, equipment, furniture and office supplies will be relocated. MSC will vacate all leased buildings by July 1, 1964.

The data building is the fourth accepted out of five programmed for construction under the Phase 2 contract. The water treatment plant, sewage treatment system and fire station were built and accepted under this contract.

Up to this time, the space agency has committed \$4,691,299.00 for site preparation and construction under Phase 2. Of this amount nearly \$1,500,000.00 was obligated for installation of lateral sewers, driveways, curbs, gutters and utility tunnels for the buildings programmed under this contract.

MSC spent \$4,752,858.00 to prepare the Clear Lake site before the first foundation was laid. The work, under a Phase 1 construction contract, consisted of relocation of oil pipe lines and a canal; grading and roads, installation of storm sewers, water and gas mains; a water pumping plant and storage tanks, utility tunnels and a field office for the Corps of Engineers. Phase 1 work was finished July 18, 1963.

- more -


Add 2
MSC 63-250

Another utility which had to be built before construction of buildings could be undertaken was the 138 KV electrical sub-station. This facility, funded under a separate contract at a cost of \$756,950.00, was accepted June 20, 1963.

A total of \$38,911,458.00 has been committed by MSC to date for the development of the Clear Lake site and construction of buildings.

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT CENTER  Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-251
December 6, 1963

HOUSTON, TEXAS -- Dr. Robert B. Voas, Assistant for Human Factors to the Director of the Manned Spacecraft Center, will address members of the Military Order of World Wars December 16, 1963 in New Orleans.

Voas' speech, entitled "Implications of Space Flight for the Nation's Future," will examine the potential impact space flight technology will have on this country.

Voas joined the National Aeronautics and Space Administration in October 1958 and assisted in the selection of the original group of astronauts.

Dr. Voas worked with engineers who have designed and developed the simulators on which the astronauts were trained to fly the Mercury spacecraft. He also was instrumental in drawing up training programs for space pilots.

In his present position, he assists the Director of MSC in biomedical problems relating to space flight. He participates as a member of the debriefing team which interviews space pilots immediately after their flight.

Dr. Voas was born in Evanston, Illinois in 1928. He holds a bachelor of arts, master of science and PHD in psychology from the University of California in Los Angeles. In addition he holds a bachelor of philosophy degree from the University of Chicago.

Add 1
MSC 63-251

Prior to his separation from active service with the United States Navy, Dr. Voas reached the rank of lieutenant. During Navy service he was a flight observe amassing about 300 hours in jet aircraft.

He is a member of the National Science Honorary Society, American Rocket Society, Human Factors Society of America and the American Psychological Association.

Voas is married and the father of two children.

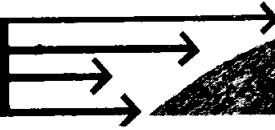
dg

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNNED SPACECRAFT
CENTER

NASA



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-252
December 12, 1963

HOUSTON, TEXAS -- The U. S. Corps of Engineers has turned over the Central Heating and Cooling Plant to the NASA Manned Spacecraft Center and the facility at Clear Lake is in operation.

The plant contains the steam generating and air conditioning equipment to serve the major structures at the Clear Lake site. It is the twelfth facility to be certified as operational or ready for occupancy out of more than 40 under construction.

The building is a two-story structure containing 27,742 square feet. It is 143 feet long and 97 feet wide. Predominant features are the solar gray window walls extending the height of the structure.

Two high pressure boilers, each with steaming capacity of 60,000 pounds per hour, will generate the steam to heat the Center. Each boiler will consume approximately 84,000 cubic feet of natural gas per hour at full capacity operation.

Steam generated by the boilers drives turbines which in turn run three separate centrifugal compressors with a total air conditioning capacity of 6,000

- more -

Add 1
MSC 63-252

ns. The chilled water then is piped to the air conditioning in the individual buildings.

A water cooling tower is constructed adjacent to the plant. This system has a capacity for reducing some 19,000 gallons of water from 104 degrees to 86 degrees Fahrenheit and returning the liquid to the boiler for recycling.

The cost of the Heating and Cooling Plant was announced as \$1,933,957 including modifications to the building that were not in the original plan. Two other small figures remain to be added. These are an amount due the Corps of Engineers for supervision and engineering services, and the pro rata cost of architectural and engineering services. Construction costs include the equipment that went into the building.

Approximately 20 heating and cooling specialists employed by William J. Graham & Son Company, service contractor for MSC, will operate the plant.

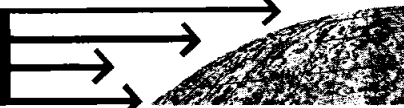
Total value of construction and equipment at the Clear Lake site as of December 1 stood at \$147,452,700. Of this amount, \$60,166,690 has been committed to the contractors.

dg

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNNED SPACECRAFT
CENTER



Houston
1, Texas

WAlnut 8-2811
Extension 3571

MSC 63-253
Dec. 12, 1963

HOUSTON, TEXAS -- Five Houston trucking firms were awarded contracts by the NASA Manned Spacecraft Center for hauling and crating services for the Center's various locations.

The contracts have an estimated value of \$333,375 and will remain in force through December 9, 1964. They were negotiated in two parts.

Part one, issued to Central Forwarding, Inc., in an amount not to exceed \$222,857 was negotiated for the daily hauling of office equipment, scientific apparatus, supplies and materials between the Clear Lake site, Ellington Air Force Base and the leased facilities.

Part two covers the movement of furniture, supplies and machinery from temporary facilities in Houston to the site.

Firms awarded these contracts were:

Westheimer Transfer and Storage Company -- \$87,000 for moving office furniture and equipment.

Westheimer Rigging and Heavy Hauling Company -- \$16,000 for hauling heavy machinery and equipment.

-more-

Add 1
MSC 63-253

Cox-Patrick Transfer and Storage Company -- \$4,050 for loading, transporting and unloading laboratory and photographic equipment.

Associated Transfer and Storage, Inc. -- \$3,450 for transporting computer and electronic equipment.

The contracts are a fixed-price indefinite quantity type and were negotiated for MSC's Logistics Division. The five companies were chosen out of 13 who responded to the proposal.

-dg-

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNNED SPACECRAFT
CENTER



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-254
December 13, 1963

HOUSTON, TEXAS -- Approximately 110 persons assigned to the NASA Manned Spacecraft Center's Computation & Data Reduction Division moved into new offices today at Clear Lake.

The group is the second large complement of MSC employees to occupy new quarters. They are housed in the two-story Central Data Office building. Last October approximately 80 employees of MSC's Logistics Division moved into their new offices.

The Data division formerly occupied offices at the University of Houston. The division analyzes post flight information on tests conducted by MSC, evaluates theoretical studies sponsored by the program offices and provides all the administrative computer services required by the Center.

Next move will be made by 30 persons assigned to the Technical Information Division. They will vacate offices in the Franklin Development Complex and Veterans Administration Building on December 20 and move into the Central Data Building.

With the completion of that move, more than 250 space agency employees will have been relocated at Clear Lake.

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNED SPACECRAFT CENTER  **Houston**
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-255
December 23, 1963

HOUSTON, TEXAS -- Members of the Technical Information Division of the NASA Manned Spacecraft Center moved into new offices today at the Clear Lake site.

The group, which includes the Technical Library containing more than 71,000 documents, have offices in the new Central Data Office building.

Headed by Charles M. Grant, Jr., the Technical Division moved from the Franklin Development Complex and the Veterans Administration Building in Houston. A total of 30 employees were relocated.

In another move to consolidate MSC functions, ten persons assigned to the Reliability and Flight Safety Office occupied space in MSC temporary headquarters, vacating a portion of the Stahl & Myers building.

dg

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNNED SPACECRAFT
CENTER



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-257
December 20, 1963

HOUSTON, TEXAS -- The Grumman Aircraft Engineering Corporation, prime contractor to the NASA Manned Spacecraft Center for development of the Apollo program lunar excursion module (LEM), recently awarded an \$8,370,000 contract to the Hamilton Standard Division of the United Aircraft Corporation to design, develop and produce the environmental control system (ECS) for LEM.

The ECS will perform two primary functions -- life support and thermal control.

The life support function includes the pressurization and ventilation of the cabin and crew's space suits. It also provides for the removal of contaminants such as carbon dioxide, odors, excess water vapor and particle matter from the atmosphere breathed by the crew.

Thermal control includes warming of cryogenic fluids and control of the temperature of the electronic equipment and of the ventilating gas for the cabin and the space suits.

During normal operation, both the cabin and the space suits are maintained at five pounds per square inch, permitting the crew to open face plates and remove the gloves from their suits. With the cabin depressurized, the space suit pressure is reduced to 3.5 pounds per square inch and the suits must be sealed.

-more-

Add 1
MSC 63-257

Pressurizing gas is 100 per cent oxygen. The major portion of this oxygen is stored cryogenically in LEM's electrical power supply system, but the ECS also includes a small gaseous oxygen accumulator for high-flow demands of short duration. Sufficient oxygen is stored in these two sources for six cabin repressurizations and two fills and four refills of the portable life support system (PLSS) oxygen tanks in addition to normal crew consumption and vehicle and suit leakage.

The thermal control function employs an ethylene glycol-water mixture as a heat transport fluid, circulated through a closed loop. Waste heat from this loop is rejected to a water evaporator, which discharges steam to the surrounding vacuum of space.

ECS work will be done at Hamilton Standard's Windsor Locks, Connecticut, plant. The company also is the contractor for the Apollo space suits and portable life support system back packs which will be used in the nation's lunar landing program.

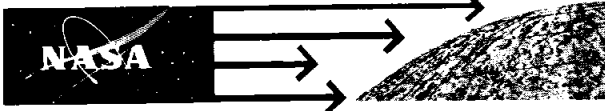
dg

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNNED SPACECRAFT
CENTER

NASA



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-258
December 19, 1963

HOUSTON, TEXAS -- Bowland Janitorial Service, Inc., of Fort Worth, Texas, has been awarded a contract by the NASA Manned Spacecraft Center for custodial services for the space agency.

The contract has an estimated value of \$262,283 and covers the offices occupied by MSC at Clear Lake, Ellington Air Force Base and the leased locations in Houston. Custodial service will be supplied on a daily, weekly and monthly basis.

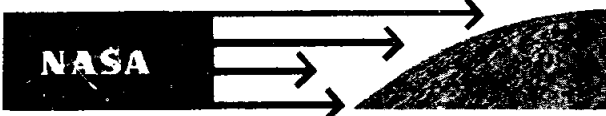
The contract will begin on January 1, 1964 and continue through January 20, 1965. Bowland won the award from among 12 small businesses who responded to MSC's request for services.

dg

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNNED SPACECRAFT
CENTER



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-259
December 24, 1963

HOUSTON, TEXAS -- Sometime in mid-1964 two astronauts will step into the Gemini Mission Simulator at Cape Kennedy, Florida, and fly qualifying missions as they train for the nation's next manned flight in space.

With that training mission, new operational responsibilities will begin for one of the best known buildings in America -- Mercury Control Center, known to millions as the nerve center of manned space flight. However, Mercury Control -- along with the Mercury program -- occupy the pages of history.

Gone are the computers, the consoles and the men who made the "Go-No-Go" decisions. In their place is a new center with more sophisticated and complex equipment.

Even the name has changed. Now it's Mission Control Center at Cape Kennedy.

In the old center, one part was well known to all the astronauts. It was a small room containing the Mercury Procedures Trainer. The space pilots and their instructors spent hundreds of hours on simulated Mercury flights.

Construction to enlarge the simulation room to 40 x 85 feet is nearly complete, and the Gemini Mission Simulator recently arrived from St. Louis and now is being

- more -

Add 1
MSC 63-259

installed. When installation is finished, the trainer will consist of the two-man crew station, instructor console, telemetry console and two computers. Later visual display equipment will be added.

The mission simulator is unique in the field of training devices in that it will not only operate as a flight trainer but it can also communicate with the far-flung complex of ground control and tracking systems associated with manned spacecraft operation. Training devices in use for many years to simulate the numerous models of military and commercial aircraft have been primarily used for pilot and flight crew familiarization and training.

The Gemini Mission Simulator, however, will be able to accept commands and to respond with appropriate signals, as would an actual spacecraft, and would thus provide an integrated training program for ground operations personnel as well as the astronauts.

The Manned Spacecraft Center's Flight Crew Support Division, which is responsible for the installation at the Cape, estimates that the simulator will be operational in six weeks. Following a shake-down of six more weeks, personnel will start making rehearsal tapes in preparation for the simulated flight training.

To maintain proper temperature in the simulation room, 15,000 cubic feet of conditioned air per minute must be furnished to flow through the equipment. Air conditioning equipment with a capacity of 360,000 British thermal units has been installed. This amount of cooling is equivalent to melting 30 tons of ice per day.

- more -

Add 2
1SC 63-259

The two-ton crew station will have some maneuverability. During simulated missions, the nose will be tilted 32 degrees from the vertical which will permit space pilots to complete tests in a semi-reclining position.

The instructor display will include duplicates of all spacecraft displays, including a moving map of the world (called an orbital position indicator) and three television screens. One screen shows the instrument panel in the crew station and two screens will show the face of each of the pilots.

The mission simulator is the first of two built for the National Aeronautics and Space Administration by the Electronic Equipment Division of McDonnell Aircraft Corporation. The two simulators are included in the \$456,600,000 contract NASA as with McDonnell as prime contractor for the Gemini Program.

McDonnell also will provide 13 flight-rated spacecraft, 12 of which will be for actual space flights.

The second Gemini Mission Simulator will be installed at MSC in Houston in 1964.

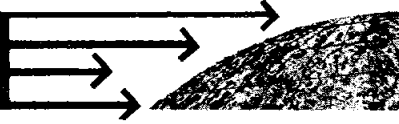
dg

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNNED SPACECRAFT
CENTER

NASA



Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-260
December 21, 1963

HOUSTON, TEXAS -- Nearing completion -- the Technical Services Shop located at the NASA Manned Spacecraft Center's Clear Lake site will house the foundry, electronics, machine, wood and metal fabricating shops. MSC will have the capability to handle all sizes of contractor-furnished spacecraft in this building.

The space agency will check vehicles here before flight approval tests are conducted at other manned spacecraft facilities.

The Technical Services building is 544 feet long and 124 feet wide and has a total of 77,381 square feet of floor space. Two 40-foot high wings flank the 74-foot high bay area. Inside are three bridge cranes capable of traversing the length of their respective wings and the high bay area. The cranes have a 20-ton load carrying capacity.

Two electrically operated five-leaf vertical lift doors open at either end of the building. The doorway area is 45 feet wide and approximately 30 feet high.

An electrically operated six-leaf vertical lift opens into the high bay area from the rear side of the shop building. Doorway area is 60 feet high and 55 feet wide.

-more-

Add 1
MSC 63-260

A mezzanine, located in each of the wings, contains a parachute rigging loft, the electronics repair shop and offices for supervisory personnel.

Under present schedules, MSC will begin moving heavy equipment from Ellington Air Force Base and the leased facilities in Houston to the Technical Services Shop starting January 8, 1964.

dg

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
MANNED SPACECRAFT CENTER  Houston
1, Texas

Walnut 8-2811
Extension 3751

MSC 63-261
December 23, 1963

HOUSTON, TEXAS -- Buildings contractors have been invited by the Corps of Engineers, Fort Worth District, to submit proposals on the construction of a Spacecraft Control Technology Laboratory at the NASA Manned Spacecraft Center's Clear Lake site.

The laboratory is to be an addition to the Spacecraft Research Office and Laboratory, a two story structure nearing completion.

The lab, on which bids have been called, will have a 40-foot high bay wing with approximately 15,000 square feet of floor area and a two story administration wing of approximately 10,000 square feet of floor area.

It is to be built behind the present laboratory at an approximate cost of \$1,500,000. Construction is to be completed within 12 months from notice to proceed with work.

The laboratory will contain facilities for noise and vibration testing, requiring construction of special block-flooring to handle the

more

d 1
MSC 63-261

work. A Clean Room, employing rigid controls over humidity, temperature and the flow of dust particles, also will be a part of the facility.

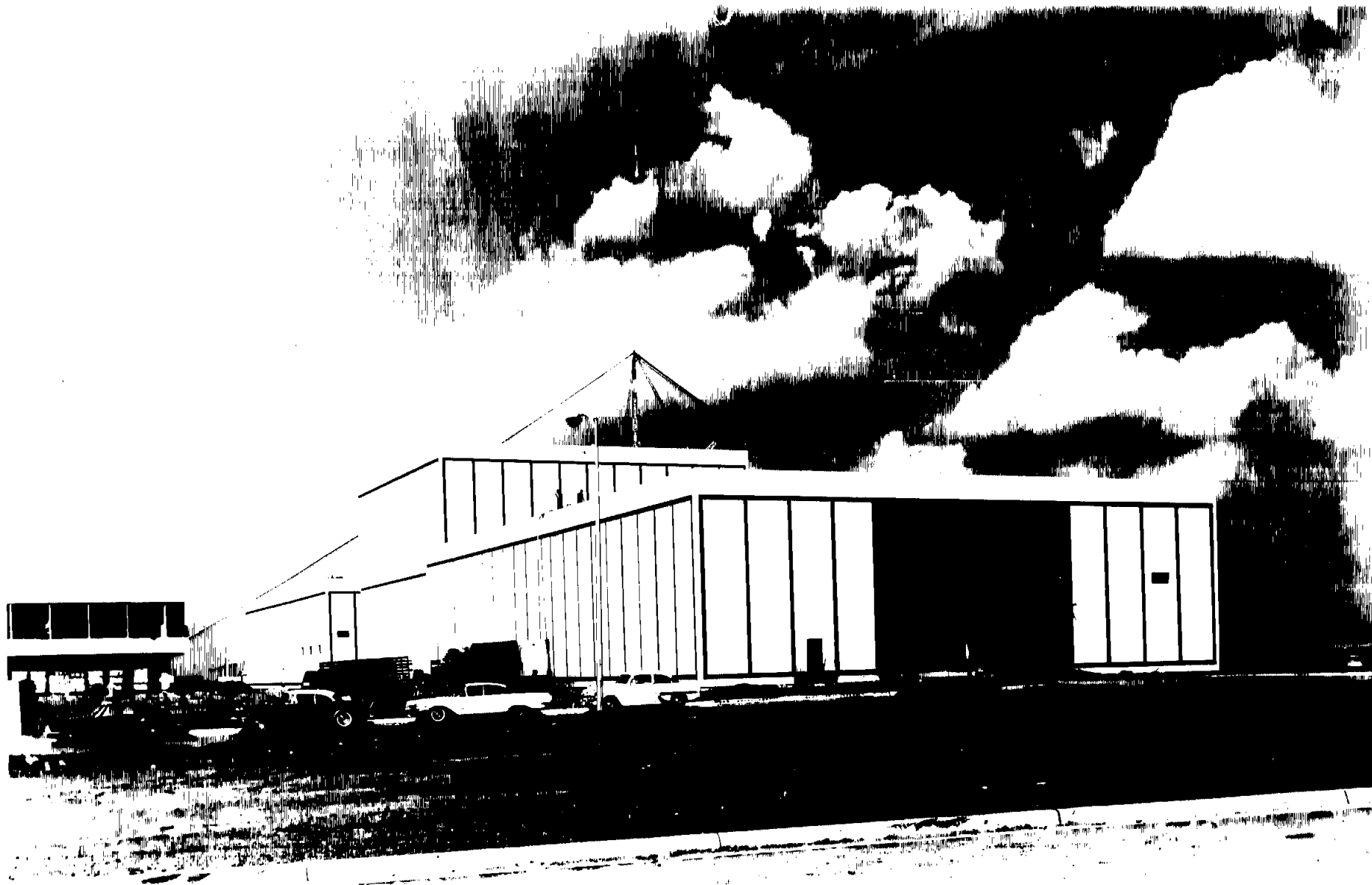
The Corps of Engineers told contractors that opening of bids will be made on or about February 28, 1964.

Prime contractors are required to submit to a pre-qualification review to be eligible to bid on the work, the Corps said. A joint venture formed by contractors for the purpose of bidding on the proposed construction will be considered, providing other requirements are met.

The Corps also disclosed that firms interested as subcontractors or suppliers need not be pre-qualified in order to furnish their bids to the prime contractor.

dg

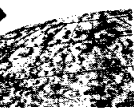
NASA
S-63-18948



NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNNED SPACECRAFT
CENTER



**Houston
1, Texas**

Walnut 8-2811
Extension 3751

MSC 63-262
December 27, 1963

HOUSTON, TEXAS -- The first fuel cells to provide onboard power and water for the National Aeronautics and Space Administration's Apollo spacecraft have been delivered by Pratt and Whitney Aircraft of East Hartford, Conn.

The prototype cells were shipped to North American Aviation's Space and Information Systems Division, Downey, California, after completing acceptance tests. North American is building the Apollo command and service modules under contract to the NASA Manned Spacecraft Center in Houston.

Fuel cells are miniature power plants -- lighter and more efficient than conventional batteries -- which will power guidance, communications, environmental controls and other electronic equipment aboard the moon-bound NASA space vehicle. The light cells can provide from 500 to about 2,000 watts of power.

more

As a bonus, fuel cells produce water for the astronauts' primary drinking supply and to cool some of the spacecraft's components. Water is a by-product of the chemical reaction by which fuel cells convert chemical energy to electricity.

Dr. Joseph F. Shea, NASA's manager of the Apollo Spacecraft Program Office at the Manned Spacecraft Center, said, "The delivery of these first fuel cells to California is one of the Major milestones in the Apollo program, and brings us just that much closer to making the manned lunar mission a reality."

Pratt and Whitney's fuel cells for Apollo use hydrogen as fuel and oxygen as oxydizer. The three delivered this week have successfully undergone tests simulating conditions expected when the powerful Saturn V launch vehicle boosts the Apollo and its three-man crew to the moon. Three such fuel cells will be used in each Apollo spacecraft.

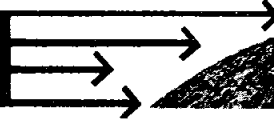
Pratt and Whitney, a division of United Aircraft Corporation, is under separate contract to Grumman Aircraft Engineering Corp. to develop smaller fuel cells for use aboard the Lunar Excursion Module (LEM). The LEM will land two of the three astronauts on the moon's surface, then rejoin the orbiting command module under its own power.

NEWS RELEASE

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

MANNEDED SPACECRAFT
CENTER

NASA



Houston
1, Texas

WA 8-2811
Extension 3751

MSC 63-263
December 28, 1963

HOUSTON, TEXAS -- The National Aeronautics and Space Administration has awarded a \$272,522 contract to S.I.P., Incorporated of Houston to build and install a space environmental chamber and associated equipment for use in thermochemical tests.

The chamber will be built for the Manned Spacecraft Center at Clear Lake for study of propellant equipment, heat rejection and energy collecting devices under simulated space conditions over long periods.

Four sub contractors will assist S.I.P. They are Consolidated Vacuum Corporation, Rochester, New York, instrumentation and controls; CryoVac Corporation, Columbus, Ohio developers of the liquid nitrogen cooling system; Platecoil Division of Tranter Manufacturing Company, Lansing, Michigan builders of the stainless steel cryogenic shroud, and Hahn & Clay Company, Houston, who will fabricate the pressure vessel and assemble the other equipment.

The chamber will look like a bathysphere on stilts. It will stand
-more-

more than 22 feet tall including the four steel support columns. Inside dimension of the unit will be 15 feet. It will be equipped with a door having an opening of nine feet in diameter.

A special feature of the space chamber will be the installation of burst discs. These are safety valves which rupture in the event of equipment failure during testing.

Equipment to be tested will be placed in the chamber by means of a removable monorail system. The system must be capable of handling loads up to three-quarters of a ton.

The chamber is to be installed by July 11, 1964 in the Thermochemical Space Chamber Building. It is being built for MSC's Propulsion and Energy Systems Division.

dg