

# Space News

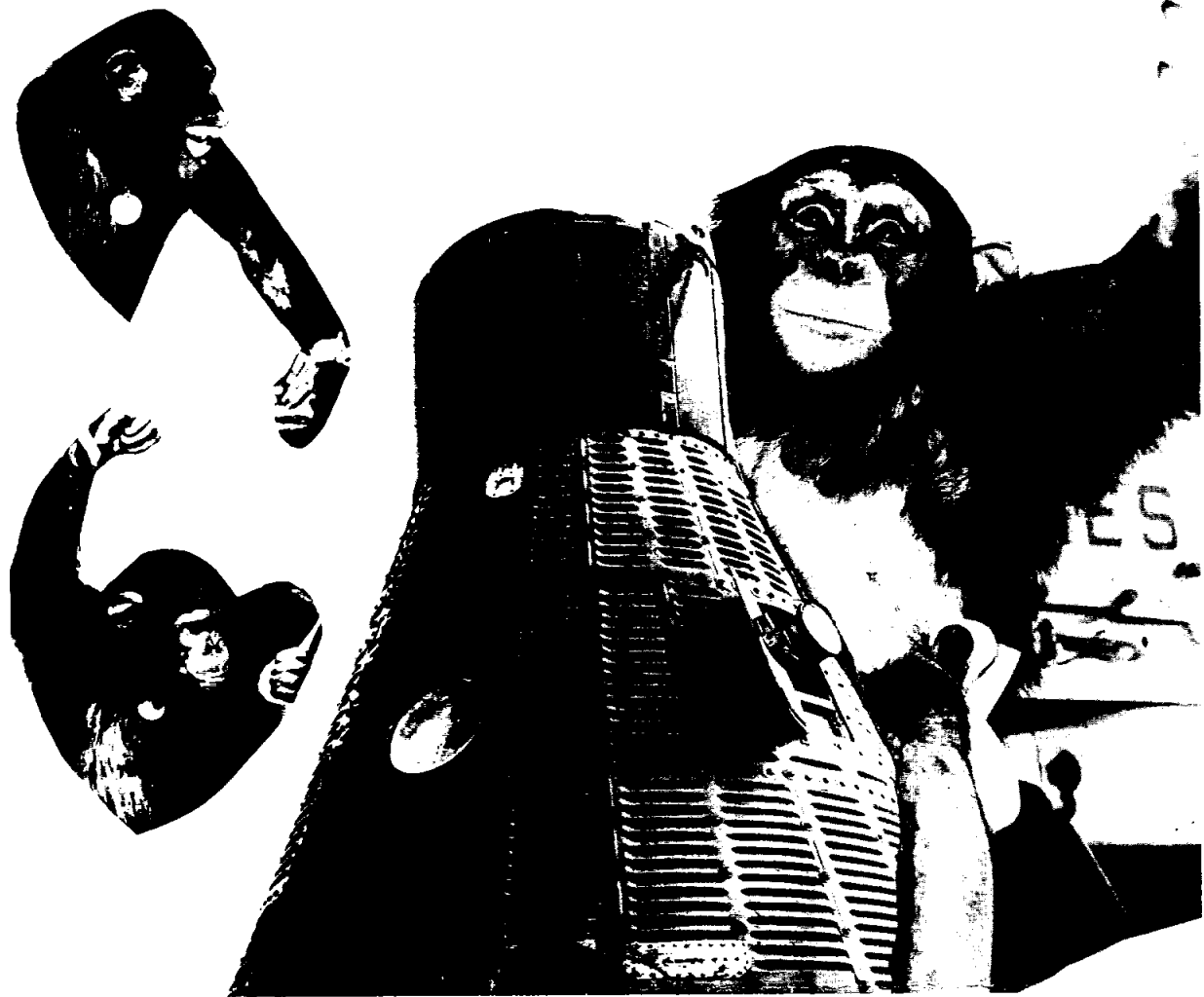
# ROUNDUP!



VOL. 1, NO. 2

MANNED SPACECRAFT CENTER, LANGLEY AFB, VA.

NOVEMBER 15, 1961



PRE-LAUNCH PREPARATIONS for MA-5 tied in the missions of Mercury spacecrafts, such as the one above, and the arrival of potential passengers for the flight. At lower left is Rocky, upper left is Ham, and Duane, on the right, signifies he is ready to go.

## Cape Canaveral Busy As MA-5 Is Readied

Cape Canaveral is a veritable "bee-hive" of activity this week as Mercury-Atlas 5 has been readied for a scheduled three-orbit flight. The spacecraft will carry a primate passenger, a medium size chimpanzee, one of five trained for orbital Mercury flights by the USAF Aeromedical Field Laboratory, Alamogordo, N. M.

### Personnel Scatter Over Earth to Man Tracking Stations

A total of 72 persons dispersed to far-flung places around the world to man the tracking stations to be used during the Mercury-Atlas 5 flight.

Since the MA-5 mission will utilize the worldwide Mercury network, it will be used to demonstrate and further evaluate the capability of the network to perform flight control and data collection functions.

Astronaut Malcolm S. Carpenter was scheduled to be in the blockhouse at Pad 14 at Cape Canaveral.

In the Mercury Control Center at the Cape were to be Christopher C. Kraft, Jr., Tecwyn Roberts, Carl R. Huss, and Howard C. Kyle, all of Flight Operations Division; Mort Schler, and Dr. Stanley C. White of Life Systems Division; Walter J. Kapryan, of the Engineering Division, H. Ellingson, Medical Monitor, and Warren North of NASA Hqs. Astronaut V. I. "Gus" Grissom was to be capsule communicator with John H. Glenn, Jr., backing him up.

On duty at the Bermuda tracking station were scheduled astronaut Alan B. Shepard, Jr., John D. Hodge and Glynn Lunney of Flight

(Continued to page 2)

The animal has been included to provide a further test of the spacecraft's Environmental Control System—the system which must provide a livable gaseous atmosphere for later manned orbital flights.

The orbiting phase of the mission is scheduled to last about four-and-a-half hours at altitudes ranging from approximately 100 to 150 statute miles.

Retro-rockets will be fired as the spacecraft approaches the West Coast of the United States during the third orbit to initiate reentry. The spacecraft will begin to enter the atmosphere over Florida, with touchdown and recovery scheduled for a spot about 800 miles south-east of Cape Canaveral.

The flight will be well documented by four separate camera systems. Three 16 mm cameras will be in operation—one to photograph the animal throughout the mission until near the time of landing, one to film the spacecraft instrument panel throughout the mission and about three minutes after landing, and one to film the field of view seen through the periscope which will operate nearly three hours after the spacecraft has entered its orbital mission. A 70 mm earth-sky camera will provide coverage throughout the mission of the view seen through the spacecraft window. High speed color film will be used in all four cameras.

## Departure Dates for Houston Studied; 11 Are Transferred

Definite plans for the move to Houston have not yet been made firm as to the actual effective dates of the departure of personnel of the various divisions. A group of personnel under the direction of W. Kemble Johnson are concentrating on this problem and as soon as a schedule has been approved it will be published in the succeeding issue of SPACE NEWS ROUNDUP.

### Two Astronauts Visit Planetarium In N. C.

Astronauts John H. Glenn, Jr., and M. Scott Carpenter recently visited Morehead Planetarium at Chapel Hill, N.C., for an intense study of celestial recognition.

They were accompanied to the University of North Carolina facility by Dr. William K. Douglas, astronaut flight surgeon, and their families.

This marks the second time since the start of the Mercury Program that the Planetarium has cooperated with the National Aeronautics and Space Administration. Its technicians devised a special set of projectors for the astronauts use in studying celestial recognition in any orbit around the earth.

Assisting Glenn and Carpenter were Harvey W. Daniel, one of the Planetarium's senior narrators and UNC Laboratory Instructor; and Chief Technician John T. Brittain and Director Anthony F. Jenzano who devised the special study effects.

### ASTRONAUTS CALLED POETS, RACE DRIVERS

The medium—television. The Show—the General Electric College Bowl. The contestants—teams of brilliant students from Amherst and Pomona. The question—"can you identify the following? Slayton, Cooper, Carpenter, and Schirra."

The buzzer sounded and the moderator called for the answer. It came—"Poets." "Wrong", said the moderator and gave the opposition an opportunity to build up valuable points with the correct answer. He received it, "Race Drivers."

As a means of further educating young America, a copy of the first issue of SPACE NEWS ROUNDUP is being forwarded to these teams for their edification.

### MSC, LANGLEY PERSONNEL VISITED BY AMES TEAM

Dr. A. J. Eggers and a group from Ames Research Center, Moffett Field, Calif., visited Langley AFB last Thursday and briefed a group of key personnel from Manned Spacecraft Center and Langley Research Center on their findings in a recent Apollo-type study.

The group journeyed to Florida Friday and briefed MSC Director Robert R. Gilruth, Associate Director Walter C. Williams and others on the study.

In the meantime, the MSC cadre at Houston are continuing their work there in the Gulfgate Shopping City. As of November 7, there had been 11 permanent MSC employees who have been officially transferred to the Houston location.

They are Martin A. Byrnes, Jr., of the Business Management Office; John L. Vincent and Luther S. Turner, Jr., of the Personnel Office; Francis J. Hickey of Security; and Robert J. Bailey of Flight Systems Division.

Also William A. Parker, Harold T. Christman, Robert L. Peck, Virginia P. Davis, Jefferson Davis, and Betty C. Byhanna, all of the Procurement Office.

### Williams Visits L. S. U.

Walter C. Williams, Associate Director of Manned Spacecraft Center, was a visitor at Louisiana State University recently.

While there he discussed the MSC program with the Dean of the Engineering School and spoke with other department heads.



MSC DIRECTOR Robert R. Gilruth, left, points out a place of interest on the Houston, Tex., skyline, as special assistant Paul E. Purser presents him with a copy of the first issue of SPACE NEWS ROUNDUP. Photo by Bob Nye



A TEXAS SCHOOL ADMINISTRATOR, Dr. Andrew R. Pupa, points out the unusual architectural design of a Clear Creek School District elementary school to Jack Leshko of Life Systems Division. Photo by Bob Nye

## Chamber Fetes NACA, NASA On Birthday

The Peninsula Chamber of Commerce sponsored a tribute to mark the third anniversary of the National Aeronautics and Space Administration and the 46th anniversary of the National Advisory Committee for Aeronautics November 1 at the Chamberlin Hotel.

There were more than 300 guests present including local government officials, scientists and administrators of both Manned Spacecraft Center and Langley Research Center, and other prominent guests.

Principal speaker at the banquet was NASA Advanced Research Director Ira H. Abbott. He cited the achievements of Manned Spacecraft Center in preparing for orbital flight and said that the people of the Virginia Peninsula are to be envied since many of the ideas and efforts in manned space flight have been the results of the work of their friends and neighbors.

Speaking later of the coming move of the MSC to the Houston, Tex., area, Abbott told the group that though it always is unpleasant to lose good citizens such experiences are required in order to build our society. He pointed out that in the new area men could work outdoors all year round assembling the new and larger spacecraft and loading them on barges for delivery to Cape Canaveral.

Representing MSC at the celebration banquet were Paul E. Purser, special assistant to the director; Charles W. Matthews, chief of the Flight Systems Division; Dr. Stanley White, head of the Life Systems Division; Robert O. Piland, assistant chief of the Flight Systems Division, and others.

Robert R. Gilruth, Director of Manned Spacecraft Center; and Walter C. Williams, Associate Director, were at Cape Canaveral on that date for the Mercury-Scout attempt so were unable to be present.

## Texas Educator Pays Visit To Langley, Advises Parents

Dr. Andrew N. Pupa, Assistant Superintendent and Curriculum Director of the Clear Creek School System spent four days at Langley Field last week. The system, which takes in a territory of 135 square miles, has its administration offices in League City, Tex. Included in the system are elementary schools at League City, Kemah, Seabrook, and Webster; a junior high school at Webster, and a senior high school at League City.

## Astronauts Spend Much Time Away From Langley Base

The activities of the astronauts are confined, in the minds of many, to the more publicized activities such as the now historical flights of Alan B. Shepard, Jr., in the Freedom 7, and V. I. "Gus" Grissom in the Liberty Bell 7.

Many do not stop to realize the importance of the team effort—the fact that each of the seven concentrates on a specific area of training and passes the benefit of his training along to his mates at regularly scheduled sessions.

Many do not realize the amount of travel that is required of the astronauts constantly—travel which must be accomplished in order to effect their normal training in all phases of the program.

A check of travel orders for a recent period of time revealed the fact that during that period one astronaut went to Akron, Ohio, for a suit fitting, one went to Cape Canaveral for an Egress Committee Meeting, one went to Point Arguello, Calif., for flight monitoring, and one went to New York City in connection with Project Mercury activities.

During this same period, at one time or another, four of the astronauts spent one day out of Norfolk on egress training, four of them went to Johnsville, Pa., for centrifuge training, and all of them spent time at the Cape for training periods.

The total number of man-days of travel involved during the period which involved parts of two months was 180, an average of three or four days per week for each man.

Dr. Pupa used the Relocation Center as an operating base while at Langley, and during his stay spoke to many prospective residents of the area, explaining many facets of the school system and the general education setup in the Clear Creek area.

He pointed out that the first semester ends January 19, 1962, and the close of the school year will be May 31. In response to specific questions, he stressed that 22 credits are required for graduation, two of which are for physical education and health. Of the other 20, only 11 credits are required and the balance may be electives.

One of the unusual aspects of the Clear Creek System curriculum is that a student, if he so desires, may take a total of nine years of Spanish. That subject is offered in all grades beginning with the fourth. In addition two years of Latin are offered in senior high school.

## NBC THRESHOLD SERIES TO FEATURE MSC

National Broadcasting Company is currently developing a film to be used in the Threshold series, a portion of which will feature Manned Spacecraft Center personnel and their activities.

In order to add realism to the film an NBC crew visited Cape Canaveral and MSC's Langley AFB facility and filmed such activities as the procedure trainer.

In addition, the show will use a tape, prepared by MSC personnel, featuring the voice of an astronaut as he describes what he might see as he passes tracking stations on an orbital mission.

## Manned Spacecraft Center Personnel to Track MA-5

(Continued from page 1)

Operations Division; Frank H. Samonski, Jr., of Life Systems; James Tomberlin of Philco; and Glenn F. Kelly and Willard R. Hawkins as Medical Monitors.

David A. Beckman of Flight Operations, and John A. Longan of Philco were to be on duty at the Zanzibar Station along with Medical Monitors Samuel Fox and Francis Flood.

John S. Llewellyn of Flight Systems and Marvin Rosenbluth of Philco were to join with Medical Monitors C. H. Krachovil and V. Marchbanks to operate the station at Kano, Nigeria.

On duty at the Indian Ocean Station will be Rodney E. Higgins of Flight Operations and Lloyd White of Philco along with Medical Monitors W. H. Hall and Richard Hansen.

John H. Langford of Structural Analysis and Harold B. Stenfors of Philco were to join with Medical Monitors Julian E. Ward and Robert Burwell to operate the station at Canary Islands.

The station at Muchea, Australia was to be operated by astronaut Walter M. Schirra, Jr., Richard A. Hoover of Flight Operations, and Albert J. Barker of Philco, with E. L. Backman and W. Bishop serving as Medical Monitors.

Frank A. Volpe of Flight Systems, William A. Wafford of Philco, and Medical Monitors E. L. Overholt and J. Lane were to operate the Woomera, Australia Station.

The Canton Island station was to be operated by Charles C. Olasky, Jr., of Flight Operations and Lewis DeLuca of Philco, along with Medical Monitors F. M. G. Holstrom and D. Graveline.

The Hawaiian station was to be operated by Robert E. Ernell of Flight Operations and Ted White of Philco, as well as Medical Monitors F. H. Austin and R. Moser.

The station at Pt. Arguello, California was to be operated by astronaut Leroy G. Cooper, Jr., Arnold D. Aldrich of Flight Operations, Richard J. Rembert of Philco, and Medical Monitors H. Bratt,

## Overtime Work Adds To Problems

The current expansion of Manned Spacecraft Center, the upcoming move to Houston, and other new projects, in addition to activities in connection with Project Mercury have added to the workload and many MSC personnel are literally burning the midnight oil.

This trend has added to the problems of the Security Guards to a big extent and they have requested the cooperation of all employees in helping to assure the security of buildings.

Those employees who do not have keys to the buildings in which they work are asked to have someone lock the door after them when they depart. In the event no other person is available to lock the door after them, they may call the operator who can locate a security guard who will be glad to be of assistance.

C. Pruett, and G. Benson.

The Guaymas, Mexico, station was to be operated by astronaut Donald K. Slayton, Thomas E. Moore of Flight Systems, and Daniel Hunter of Philco, along with Medical Monitors T. R. Davis and W. Turner.

Helmut Kuehnel of Flight Operations and Cyrus Rumbaugh of Philco, along with Medical Monitors G. B. Smith, Jr., J. Lawson, and R. Kelly were to operate the Corpus Christi, Texas station.

Paul G. Brumberg of Flight Operations was to be on duty at Ramey AFB, Puerto Rico.

All of the above indicated travel of MSC personnel added up to a king-sized headache for Toni Myrsten of the Travel Office who typed the necessary orders, secured the passports, made reservations and picked up the tickets.



MRS. GRACE WINN

## MRS. GRACE WINN WILL SERVE IN "GOOD WILL" ROLE

Mrs. Grace Winn, a native of Waxahachie, Tex., joined the MSC staff at Houston Monday. She will serve as a special assistant to the Personnel Officer, S. H. Clarke, with her principal duty for the next few months scheduled as a "good will" emissary.

Mrs. Winn, who operated the Winn Employment Service in Houston from 1943 to 1956, will be involved with relocation problems of a personal nature.

It is anticipated that she will spend some time in Houston, getting re-acquainted with the rapidly growing vicinity and then make several trips to Langley to meet with the ladies who will be moving to the Houston area.

She will brief them on the Houston situation as pertains to housing, schooling, special schooling, and other facilities and will be prepared to return to Texas to try to solve the answers of particular problems which may be presented to her during her visits to Langley by the prospective Texans.

**BUY  
SAVINGS  
BONDS**

## Scenic Tours Of Houston Area Offer Big Variety of Attractions

Moving to the Houston area? Want to know what there is to do? Houston's Adventure Map lists seven tours which might answer a lot of your questions about a lot of things including where you might want to live. Of course this map costs 25 cents but what is money these days?

Tour 1 (Residential Browse) will lead you to the Victory Monument, Buffalo Bayou, Jefferson Davis Hospital, Memorial Park, Riding Stables and Trails, Memorial Residential Area, St. Mary's Seminary, Houston Country Club, Tanglewood Residential Area, Wild West Play Park and River Oaks Residential Section—approximate driving time, two hours; approximate distance, 22 miles.

Tour 2 (Arts to Zoo Romp) will lead you to St. Thomas University, Houston Museum of Fine Arts, Rice University, Many Churches and Synagogues, Rice Stadium, Shamrock-Hilton Hotel, Prudential Building, Veterans Hospital, Sacred Heart Dominican College, Pierce Junction Oil Field, Play Parks, Texas Medical Center, Hermann Park (Zoo, golf course, S. P. Locomotive), Sam Houston Statue, and Playhouse Theater—approximate driving time, two hours, approximate distance, 26 miles.

Tour 3 (Lake Houston) will take you past the Union Station, Oil Fields, Atascocito Country Club, Lake Houston; Camping, Swimming, Water Skiing and Sailboating sites; Deussen Park, Picnic Areas, Public Boat Landing, and the Southern Pacific Gravity Yards—approximate driving time, three and a half hours, total distance, 86 miles. (A shorter alternate route is shown on the map).

Tour 4 (Marks LH7 Ranch) will make it possible to see Memorial Park, Archery Club, Sheriff's Mounted Posse Headquarters, and features Mark's ranch: Includes a tour of the ranch, view of one of the largest Texas Longhorn herds in existence, and a visit to a log cabin museum. (Essential to notify owner in advance)—approximate driving time, one hour; approximate distance, 46 miles.

Tour 5 (Port of Houston—San

Jacinto Battleground) will lead you to downtown Houston, Navigation Boulevard Industrial Section, Port of Houston, Washburn Tunnel, Oil Tank Farms, Oil Refineries, San Jacinto Battleground Monument, Museum of History, U. S. Battleship Texas, and the San Jacinto Inn—approximate driving time, one and a half hours, 48 miles.

Tour 6 (Bayshore Tour) goes to Busch Stadium, University of Houston, Gulfgate Shopping City, Harris County Park, Clear Lake Yacht Basin, Seabrook-Kemah Waterfront, Bait Houses, Fish Houses, Charter Boats, Sea Food Restaurants, Galveston Bay, Sylvan Beach Park, Goose Creek Oil Field, Baytown-LaPorte Tunnel, Baytown Refinery, and the Washburn Tunnel—driving time, 4 hours, 100 miles.

Tour 7 (Freewaying to Galveston) leads to Gulfgate Shopping City, Houston International Airport, Former Navy Blimp Hangar, Galveston Causeway, Seawall Boulevard, Fort Crockett, Stewart Beach, Bolivar Ferry (Toll Free), Sacred Heart Church, Bishop's Palace, Sulphur Docks, Mosquito Fleet (Shrimpers), Victory Statue, Pelican Island, Texas City, and South Houston Oil Field.—Driving time, seven hours, 136 miles.

These tours, all outlined in color, all start at Houston City Hall. They are, of course subject to change, at any time.

Only one of these tour maps is available and it is posted on the wall at the Relocation Information Center located in Building T-107 on the second floor.

**Have You  
Checked?  
TO DETERMINE  
THAT CONFIDENTIAL  
MATERIAL IS  
PROPERLY  
Safeguarded**



MC DONNELL AIRCRAFT president, James S. McDonnell, left and vice president Walter F. Burke were among those at Cape Canaveral when the final tests were run on the systems of the Mercury spacecraft to be used for the MA-5 flight.

## Gilruth Tells Journalists Of Space Responsibilities

(Continued from page 8)

"soft," controlled landing in a vacuum on a surface about which almost nothing is known now.

- Protection of the craft from the searing heat of reentry into the earth's atmosphere at a speed of seven miles per second.

He said that it is very clearly indicated that the solutions to these and other complex problems involved will result from application of three major factors.

- (1) The development and implementation of a dynamic management team.

- (2) The broadening of the national research and development base—not only by creation of new capacities but also by taking greater advantage of military research effort for the accomplishment of these important national goals.

- (3) The development and expression of national will. In speaking of this factor, Gilruth said, "I am convinced that we have the

technical capacity to accomplish these extremely difficult and complex tasks. Whether we accomplish the President's stated objective within the time limit he has set depends to a great extent on our national will to do so.

"Here, each of you must share this responsibility with us. One of the difficulties involved in talking with Space people—not the little green men who land out on the desert and say 'Take me to your leader,' but the scientific and engineering people—is that they speak a special language all their own. They are likely to lose you after the first comma.

"We in the space research business are working hard on language simplification. All of you in the communications industry need by continued hard work—to learn the language—to develop a translation capability—and finally, to bring the public space I.Q. up as fast as possible.

"It is only through such efforts

### GILRUTH ATTENDS SCIENTIFIC MEETING

MSC Director Robert R. Gilruth attended a meeting of the Air Force Scientific Advisory Board at Chandler, Ariz., November 6-7.

During the course of the meeting Gilruth discussed the National Aeronautics and Space Administration's Manned Space Program.

that we can all be assured of an informed and understanding citizenry—one well qualified to express its will intelligently.

"We have flown 22 spacecraft in the Mercury program. Not all of the flights achieved all of the specified test objectives. But we learned from every flight. And each flight contributed to the achievement of our mission—manned space flight. I am convinced that if the public—the real stockholders in this great national corporation—understand these things—we cannot fail."

# Shepard Tells 'A Pilot's View of a Trip to the Moon'

Astronaut Alan B. Shepard, Jr., received the Theodore Roosevelt Distinguished Service Medal at a meeting of the Theodore Roosevelt Association in New York City October 27, and later presented to the group "A Pilot's View of a Trip to the Moon."

Speaking in lay terms, Shepard presented a vivid word picture of the trip, scheduled hypothetically to start on December 12, 1969, and last seven days. It would allow the three members of the crew to spend between 18 and 24 hours on the moon.

The "picture" starts with the launching scene at Cape Canaveral, a general description of the pre-launch activities, the space suits, the crew's entry into their spacecraft and their final checks prior

to the actual launch.

He then described the lift-off and their subsequent actions which would culminate in their firing a set of rockets which would start them on their trip to the moon. He pointed out that they will start their trip at a speed of about 25,000 miles per hour, gradually slowing down because of the earth's gravitational pull until they reach a point six-sevenths of the way to the moon. At this point the moon's gravity will then become more effective and they will start to increase speed under lunar influence.

The flight calls for the crew, as they approach the moon, to slow down and go into what is called a moon orbit before making their landing in the Sea of Tranquility—located on the moon's equator. He

described the landing as the spacecraft comes in with its tail down with its rockets firing to slow it. The spacecraft will settle gently to a vertical landing on adjustable legs which project out from the side to insure that a deviation in the ground or a soft spot in the moon's dust will not cause the ship to topple in any direction.

The crew will then don their space suits, go through an air lock mechanism and down the side of the air ship in the ladder to walk around on the surface of the moon, to collect samples from the moon itself, to find out how thick the layer of dust is if there is any, to determine what sort of material the moon is made of and what elements are present which are not found on the earth, and to make

general observations as to the relative difficulty of establishing a scientific or military outpost on the moon.

On the return, they will leave behind the rockets and rocket engines used in the landing, thus lightening their spacecraft considerably. Shepard pointed out that the thrust requirements to get away from the moon's surface will be much less since the moon's attraction is only one-sixth as great as the earth's.

The return trip will require two-and-a-half days as did the out-going journey and they will reenter the earth's atmosphere at a speed of 25,000 miles per hour. He pointed out the dangers prevalent in both legs of the trip (1) weightlessness, (2) radiation or solar flares, and (3) ability to react properly to the

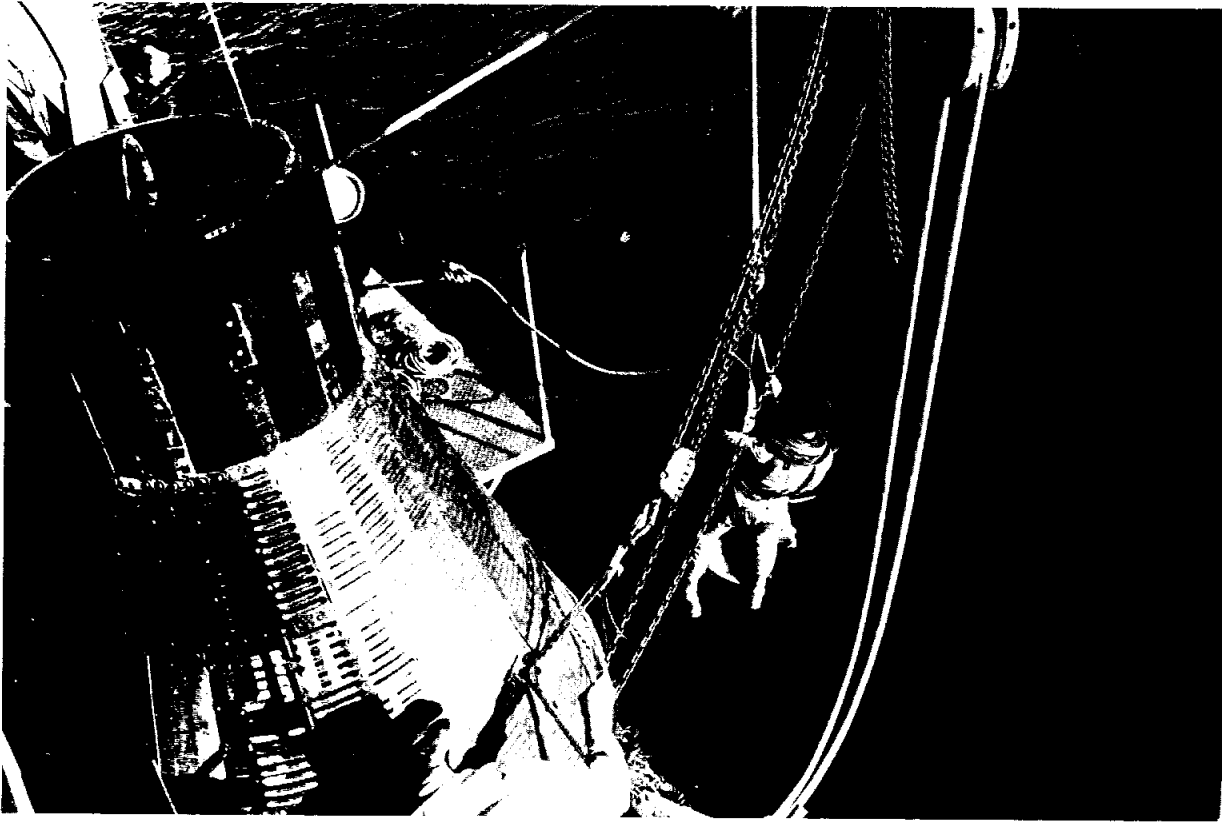
forces of reentry.

With the help of their friends on the ground who have been tracking them, they will determine at what angle to come back into the earth's atmosphere and determine a desired landing site.

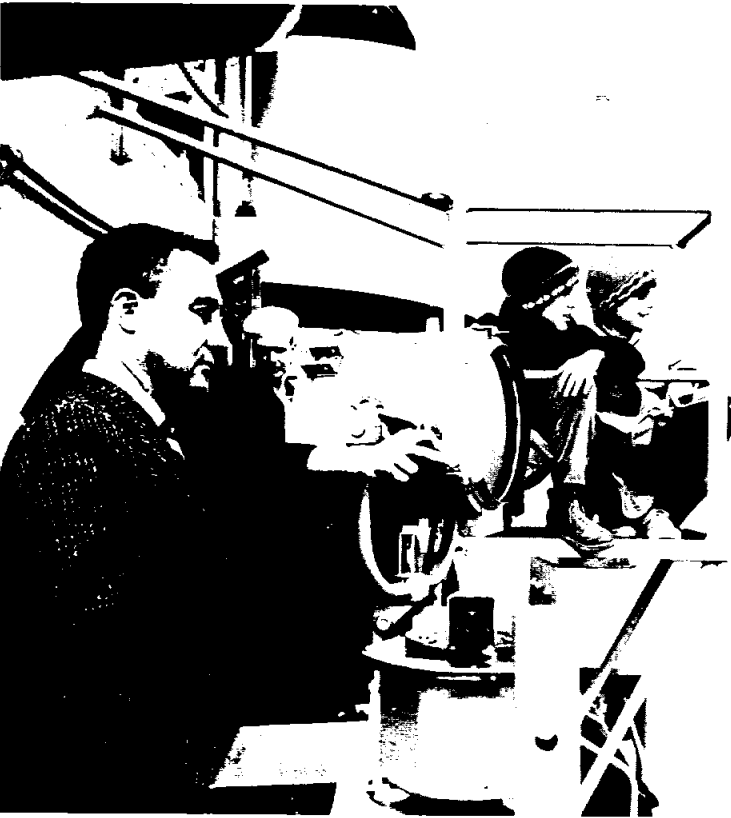
The spacecraft will probably use parachutes for the final stages of the earth landing, and as the spacecraft touches the ground the three crew members will step out to reveal to the people on earth what they have learned about the moon.

Others who received the Distinguished Service Medal at the meeting were John J. McCloy, who recently headed a Disarmament Panel for the President; and Erwin D. Canham, Editor of the *Christian Science Monitor*.

# Water Egress Training Is Important



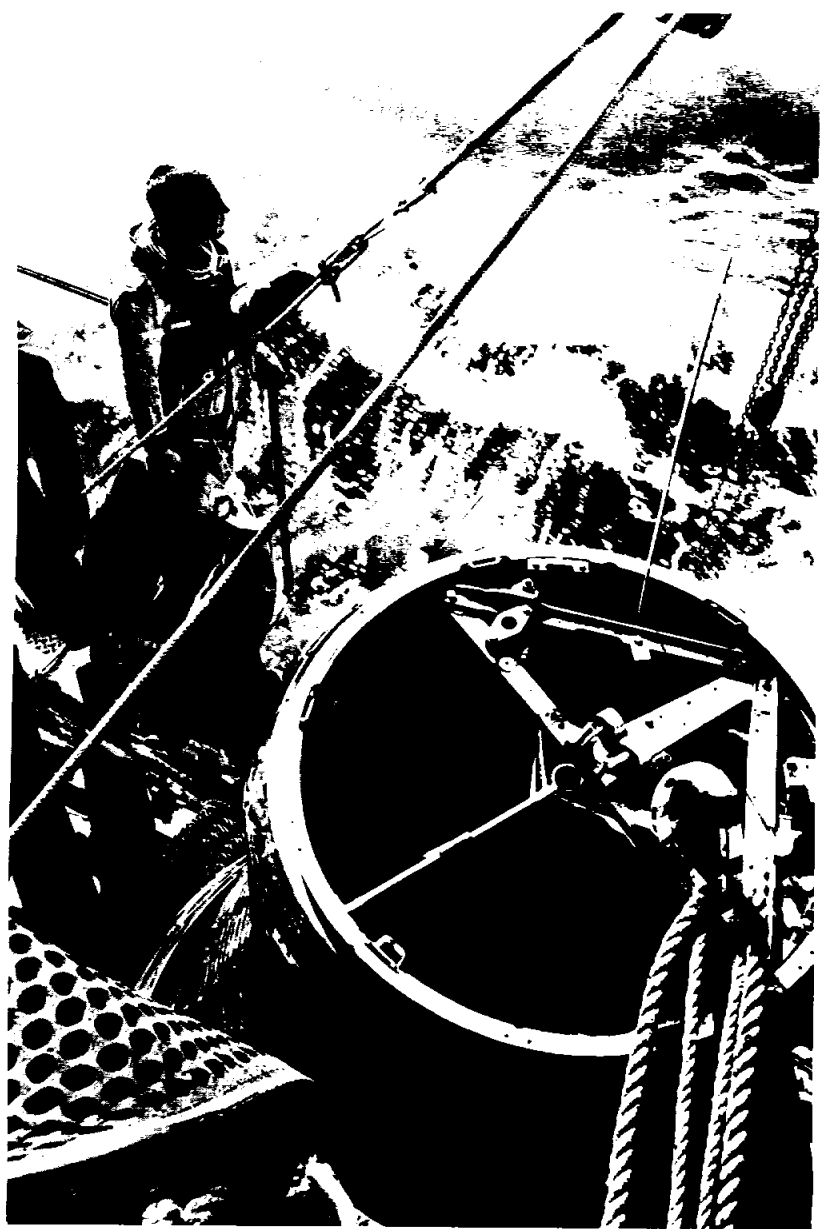
THE RECOVERY IS EFFECTED and Grissom and his raft are lifted from the water by the Blandy's davit.



GRISSOM WATCHES the capsule during the practice run. His son, Scott, far right, and David Longacre, also watch.



GRISSOM, suited up, is ready to get into the capsule.



GRISSOM, with raft in hand, looks at the waters before being lowered by the davit.

By: I. D. Ertel

The training of astronauts for space or orbital missions is a continuing process—one of many phases—one which many people work constantly at as new lessons are learned with every shot—lessons which require that many techniques be re-evaluated. One phase of this training is concerned with egress, a phase most important in the recovery activities.

The latest series of water egress training featured a combined training exercise for the astronauts and the Navy with destroyers of various classes participating on different days in order to prove their ability at retrieving the capsule directly from the water and using the same technique in bringing the astronaut aboard after picking him up from a rubber raft—this technique differs from that used in past manned shots—the process of picking up both the astronaut and the spacecraft by helicopter and transporting it to a nearby ship, however, the destroyer technique practiced could have been employed in the shots if they had landed near a destroyer.

#### The Day Starts

On October 26 the astronaut involved was Virgil I. "Gus" Grissom—the destroyer, the USS Blandy. The MSC party boarded the vessel at Norfolk a few minutes before 7 am and in a matter of minutes we were steaming toward the operations area.

Following breakfast in the wardroom, there was a briefing conducted on the planned activities of

the day with Bob Thompson, Peter Armitage, Walt Hoggard, Dr. William Douglas, and Grissom participating in the discussion which followed, along with the Captain of the Blandy, Cmdr. Ed Kelley, Cmdr. N. R. Girault, and other key members of the crew as plans were firmed up for the sequence of actions anticipated.

One of the suggestions made by members of the MSC group was that a light line should be attached to the capsule and fastened to the recovery craft scheduled to be in the immediate vicinity for safety reasons after the capsule was placed in the water.

#### A Light Moment

The ship's captain quickly stated that he could not operate with maximum efficiency with a loose line in the water and someone quipped, "there's nothing to worry about, Gus, if anything should happen it would be easy to mark the spot and you'd only be in 40 feet of water."

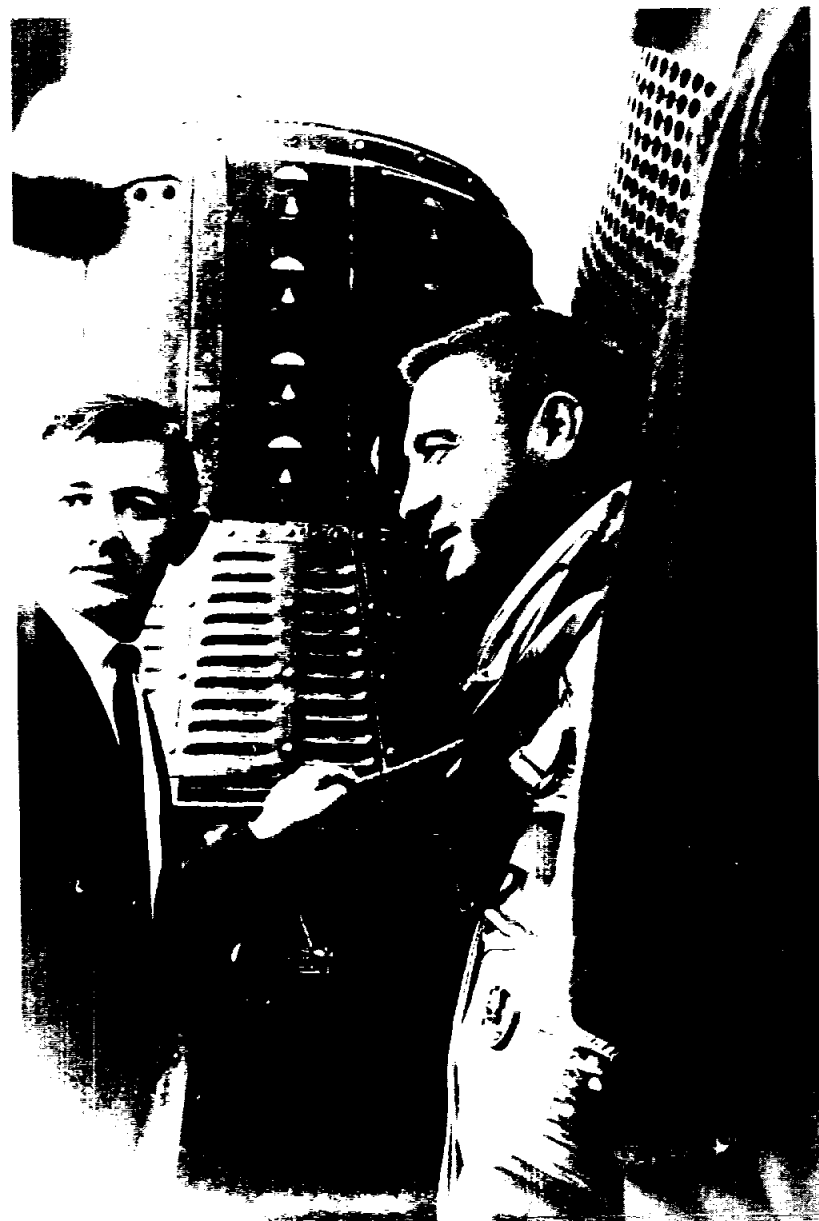
After reaching the operations area, the capsule was lowered and the Blandy made a practice run on it in order that the crew might become familiar with the operation. Not quite satisfied with the results, those in charge decided that another "dry run" with the un-manned capsule was indicated.

The capsule was lowered again, the Blandy circled, and the yeoman with the Shepherd's Crook did yeoman service as he snagged the capsule as it slid past the bow. The remainder of the rescue practice was completed in an efficient manner.



THE MR-2 CAPSULE proved to be an unusual attraction for a large flock of sea gulls which headed for it like homing pigeons.

# Final Phase of Recovery Program



**A TRAINING POINT** is discussed by Grissom and Peter Armitage as they stand by the MR-2.

Then they were ready. Grissom was suited up in his silver astronaut's gear and entered the MR-2 capsule being used. He was lowered into the water and the Blandy started its circle preparatory to making the recovery.

The progress made during the twentieth century was forcefully brought to the fore as we saw the capsule bobbing in the distance—an astronaut inside in constant communications contact with the destroyer—helping to develop a recovery technique which will perform efficiently. When necessary, this system may pick up an astronaut who has completed a three-orbit mission at a height of more than 100 miles from the earth.

Sixty years ago, almost to the day, (Oct. 24, 1901) the people of the United States were stunned at the daring of Anna Taylor who went over Niagara Falls in a rubber barrel. (The falls are 167 feet high on the American side.)

### The Boys Watch

We glanced upward to the bridge as the Blandy left the capsule and started to make its required circle before the recovery. There, along with their escort officer, were Grissom's son, Scott, and a friend, David Longacre, with their eyes glued on the capsule bobbing in the distance with Grissom inside.

The run was fast, the recovery smooth, and only 11 minutes had elapsed from the time the capsule was dropped until the pick-up had been completed.

By this time several hours had elapsed and all hands (and guests) were happy to leave the deck and

escape the chilling breeze to adjourn to the warm confines of the ship and the accompanying pleasure of a good meal.

Following lunch, Grissom was lowered into the water, slipped his "horse-collar", inflated his raft and got into it, and the Blandy slipped away again to make its circle before recovery.

As we reached the most distant point from him, he seemed to disappear momentarily as the tiny raft rode the waves. Again we looked to the bridge and could tell by the changing size of the eyes of the two young lads there just when Gus had dipped out of view.

### Recovery Effected

Once again the Blandy performed her task rapidly and well and the recovery was swift and efficient.

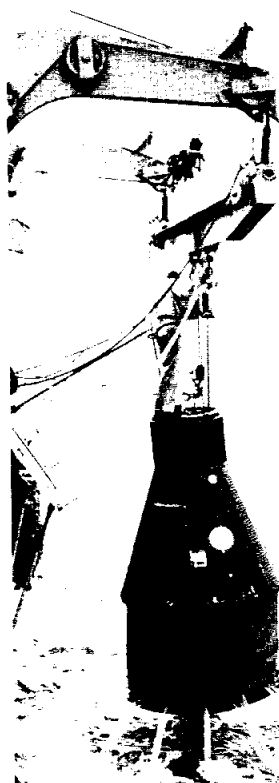
The problems encountered during the exercise as well as the successful procedures used are to be consolidated with like information with use of destroyers of different classes and will be printed in the form of training manuals and distributed to all ships participating in recovery missions on future shots.

Commenting on the training, Armitage said, "We feel the destroyer is a real good recovery vehicle and has speed capability, and the use of destroyers as a recovery medium has proven entirely satisfactory. Destroyers are used in all prime recovery areas in the Atlantic or orbital missions, and therefore it is invaluable to train crews for this vital recovery phase."

The Blandy arrived back at its pier at 5 p.m. and the MSC personnel debarked and departed for their home "ports".



**GRISSOM APPEARED** to be in a contemplative mood as he awaited his recovery.



**CAPSULE RECOVERY** is effected by the davit of the USS Blandy.



**A SMILE OF VICTORY** on the face of the Blandy's skipper, Cmdr. Ed Kelley after a fast recovery.



**A DISCUSSION OF TECHNIQUES** between Grissom, Bob Thompson, and others shortly before the astronaut entered the capsule.



The SPACE NEWS ROUNDUP, an official publication of the Manned Spacecraft Center, National Aeronautics and Space Administration, Langley Field, Va., is published for MSC personnel by the Public Affairs Office.

Director . . . . . Robert R. Gilruth  
Public Affairs Officer . . . . . John A. Powers  
Editor . . . . . Ivan D. Ertel  
Staff Photographer . . . . . Bill Taub

## What People Said . . . . . . About Space News Roundup

There is an old saying that "he who tooteth not his own horn, his horn shall not be tooted," or words to that effect. Nothing could have been further from the truth as this infant publication was born on November 1.

MSC personnel have been most lavish with their praise and it is most gratifying to know that in our first attempt we seem to have found some key toward giving the people what they want.

The editor and other members of the Public Affairs Office received congratulations over the phone and in person from a countless number of people. Unfortunately, many of them were made in places, like the cafeteria, with crowds around and it was impossible to record them all.

Following are some of the quotes—yours may be among them . . .  
"It looks real good", Paul Sturdevant . . . "Real interesting, I thoroughly enjoyed it", Joe Kreske . . . "A real fine job", Stuart Clarke . . . "It's first class", Charles Bingman . . . "Best I've ever seen", Ann Hill . . . "Real newsy and a wonderful paper", Phonicille DeVore . . . "It's wonderful", Toni Myrsten . . . "It looks real good, congratulations", Allan Doyle . . . "Real good newspaper, I even took it home", Jerry Hammack . . . "It's terrific", Vera Elliott . . . "A real fine paper", Peter Armitage . . . "It looks good", Paul Purser . . . "You did a beautiful job, it's a real fine paper", Voula Tsitsera . . . "Its a fine paper", W. A. Parker . . . "A real good newspaper", Jim Rose . . . "A real nice newspaper, you did a good job", Jack Heberlig . . . "The paper looked good", R. R. Gilruth . . . "It's all right, you did a good job", Jimmy Morris . . . "It was a real good paper", W. C. Williams . . . "It's a real good paper with surprisingly few typos", Rodney Rose . . . "I loved the paper, you did a good job", Doris Kreske . . . "It was beautiful", Janet Rydout . . .

These gracious compliments have all been accepted humbly. We feel happy that we have made the first issue one that was so universally accepted. This paper belongs to all members of Manned Spacecraft Center, and, although we greatly appreciate your compliments, we also need and welcome constructive criticism from you.

There will be a continual effort to make the paper more worthwhile every issue, and every possible endeavor will be made to insure that it tells the story of the MSC programs in a manner that will keep you up-to-date on all facets of activities.

## On The Lighter Side

Have you ever been confused about the process involved in travel? The clearances required for certain trips? The passport regulations regarding certain trips?

Consider the cases of astronauts Alan B. Shepard, Jr., and V. I. "Gus" Grissom who made the first two space flights. There were many questions which arose concerning those trips as to cutting orders, passport validity, etc.

MSC personnel were able to come up with the answers. As proof of that, the cases mentioned above are cited. The special provisions section of the overseas travel orders indicated that travel by Redstone rocket boosted Mercury Spacecraft was authorized; the purpose of travel requirements was satisfied with the following statement, "To investigate man's capabilities in the space environment and to report results of the investigation".

The travel voucher resulting from Shepard's flight included the following entry:

5/5/61 LEFT CAPE CANAVERAL, FLA. AT 9:34 A.M.  
VIA MERCURY REDSTONE ROCKET  
Arrived Grand Bahamas at 1:00 p.m.

In Grissom's case the travel voucher included the following entry:

7/21/61 Left Patrick AFB, Fla. at 7:22 a.m. via Mercury Redstone Rocket  
Arrived Grand Bahama Island at 11:00 a.m.

A natural question was brought to mind and the answer was sought from Peggy Lail, Travel Voucher Branch. She was asked if mileage claims could have been filed by the two astronauts, and she replied, "Yes, if privately owned rockets and spacecraft had been used".

## EDITORIAL EXCERPTS

HOUSTON POST —

September 20

A new era in science, education, and economic progress for Houston and the Texas Gulf Coast area began Tuesday with the announcement that the \$60 million manned space flight center of the National Aeronautics and Space Administration will be built here.

For science and education it means an unparalleled chance for students in all the educational institutions in this part of the country to be among the first to share in the new knowledge of the universe that will come from the forthcoming exploration of the moon and the planets.

It should not be considered that the coming ventures into space are mere spectacular stunts or only a competition with the Soviet Union. There is no doubt that man will learn things now undreamed of about the earth and his own environment while exploring space.

And many of these new discoveries will first become available to students and scientists in the Southwest. It is here that the Apollo capsule to take the first three space-men to the moon will be built. Before they can go, it will be necessary that we know everything possible about the Van Allen radiation belts that encircle the earth, the showers of particles that the sun shoots out into space between the earth and moon, and whether the moon's surface is made up of solid rocks, deep layers of dirt, or even green cheese.

HOUSTON PRESS —

September 20

Several weeks ago we wrote an editorial on what a great boon it would be to Houston IF the Manned Flight Space Center were to be located here.

We kept our 'if' pretty high. We felt we had to—it was just a little too much to hope for that this city would be singled out for Space Age leadership.

It has come true. We can erase the 'IF'. Many were checked but Houston was chosen.

Think of it . . . 3,000 to 4,000 gifted and highly educated men and women plus their families moving here almost en masse . . . \$60 million in super-modern construction as a starter to add to the city's constant building . . . around \$30 million to \$40 million per year in additional payrolls . . . the job-making new homes, stores, professional care, financing, and other public and private services these Space Age immigrants will require . . . the increased support of cultural, religious, sports and other activities they insure . . . the myriad undreamed-of businesses and enterprises sure to follow this Space Center here as research and testing grow into operation and expansion . . . the world-wide name and fame that is sure to be Houston's . . .

This is not simply a huge shot in Houston's social-economic arm. This is the beginning of a new era for our magic city . . .

## MSC PERSONALITY

# Associate Director Walter C. Williams

Walter C. Williams, Associate Director of Manned Spacecraft Center, is a native of New Orleans, La. He received a Bachelor of Science degree in Aeronautical Engineering from Louisiana State University, Baton Rouge, La., in 1939.

After graduation he was employed by the Glenn L. Martin Company of Baltimore, Md., and later that same year joined the NACA's Langley Research Laboratory, where he initially worked in the Stability and Control field, predominantly with World War II aircraft.

In September 1946, Williams was assigned as the NACA Project Engineer for the X-1 experimental aircraft research program and in August 1957 was designated head of NACA's detachment at Murco, Calif.

When this detachment was expanded into a permanent facility he was appointed as the first Chief of the NACA High-Speed Flight Station and continued in that capacity after the station was absorbed by the National Aeronautics and Space Administration along with other NACA facilities in October 1958.

In this assignment he directed a great variety of flight research test programs, including the following:

- X-1 flight investigation of the transonic and supersonic speed regimes.
- Comprehensive programs involving the D-558-11 airplanes, one of which was the first aircraft to fly twice the speed of sound.
- X-4 programs emphasizing stability and control investigations
- Variable wing-swept X-5 programs
- Program involving the XF-92A, prototype delta-wing fighter
- B-47 flight investigations
- Programs using the X-3 on which inertia coupling was first experienced
- Investigation using Century-series fighters, F-100, F-102, F-104, F-105, and F-107

Williams was actively engaged in establishing the research requirements for the development of the U.S. X-15 aircraft, and in his position as Chief of the NASA High-Speed Flight Station he directed the planning of the research program to be carried out with the X-15.

In January 1958 he became Chairman of the X-15 Flight Test Steering Committee, changed in January 1959 to the X-15 Joint Operating Committee.

In April 1959 he was appointed a member of the Advisory Group for Air Research and Development for the North Atlantic Treaty Organization.

Williams was appointed to his present post in September 1959.

He is the author of numerous technical papers on aircraft flight research.

He is as Associate Fellow of the Institute of Aeronautical Sciences and a member of the Mexico-U.S. Commission for Space Tracking Observation—Project Mercury.



WALTER C. WILLIAMS

Williams has been prominent in program participation and was:

Chairman, Flight Testing Session, Institute of Aeronautical Sciences, 1958; and Session Chairman, Conference on the Progress of the X-15 Project, 1959.

He has also presented a number of papers including the following:

"The X-15 Research Airplane Program," presented at the American Rocket Society Space Exploration Regional Meeting in San Diego, Calif., in 1958

"The Comparison of Flight Measurements of High-Speed Airplane Stability and Control Characteristics," presented in Brussels, Belgium in August 1956.

In addition Williams has authored a number of papers among which was "Instrumentation, Airspeed Calibration, Tests, Results and Conclusions" (Concerning the X-1's first supersonic flight), in 1948.

Flight Tests of Narrow-Chord Elevators on a P-47C-1-RE Aircraft. NACA Memorandum Report for Army Air Forces, Materiel Command, January 17, 1944.

Flight Tests of the Lateral Control Characteristics of an F6F-3 Airplane Equipped With Spring-Tab Ailerons. April 1945.

A Flight Investigation of NACA Aileron Modifications for the Improvement of the Lateral Control Characteristics of a High-Speed Fighter Airplane. December, 1945.

Limited Measurements of Static Longitudinal Stability in Flight of Douglas D-558-I Airplane. June 1948.

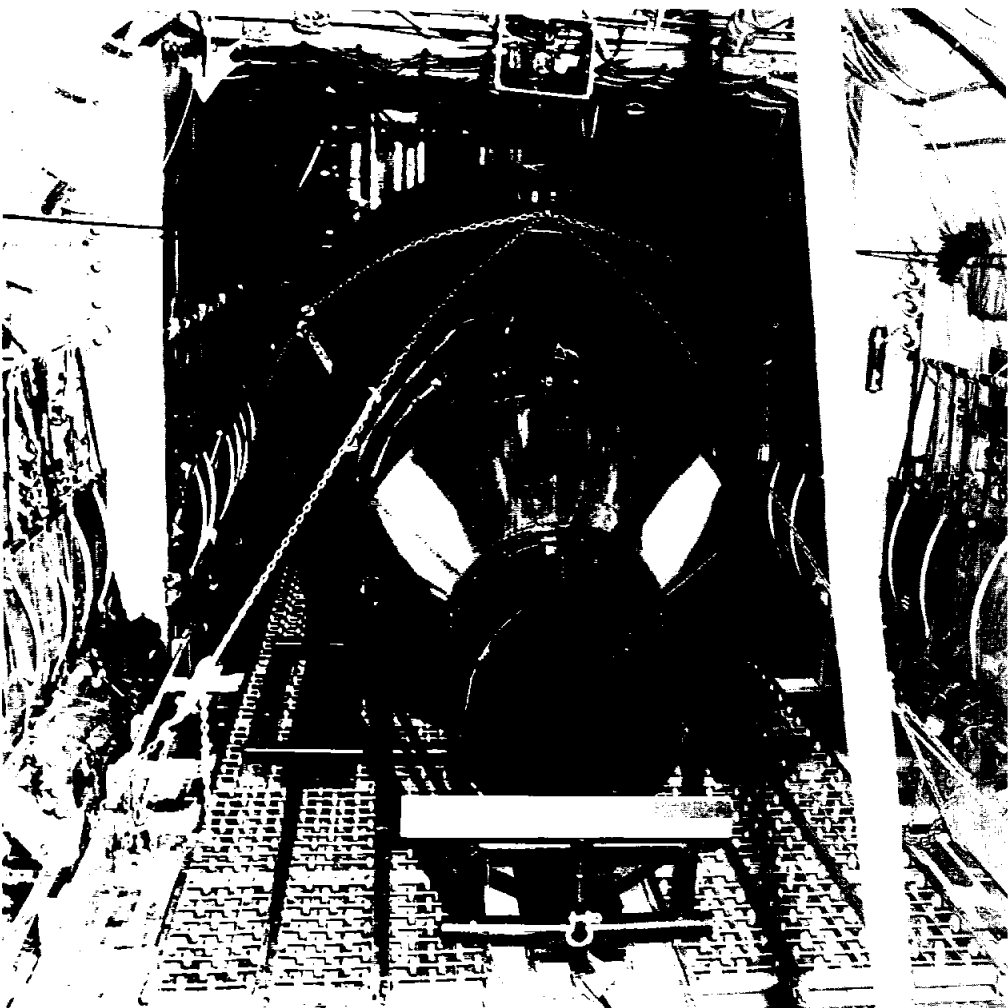
Results Obtained From Second Flight of X-4 Airplane. July 1949.

Results Obtained From Third Flight of Northrop X-4 Airplane. Septemebr 1949.

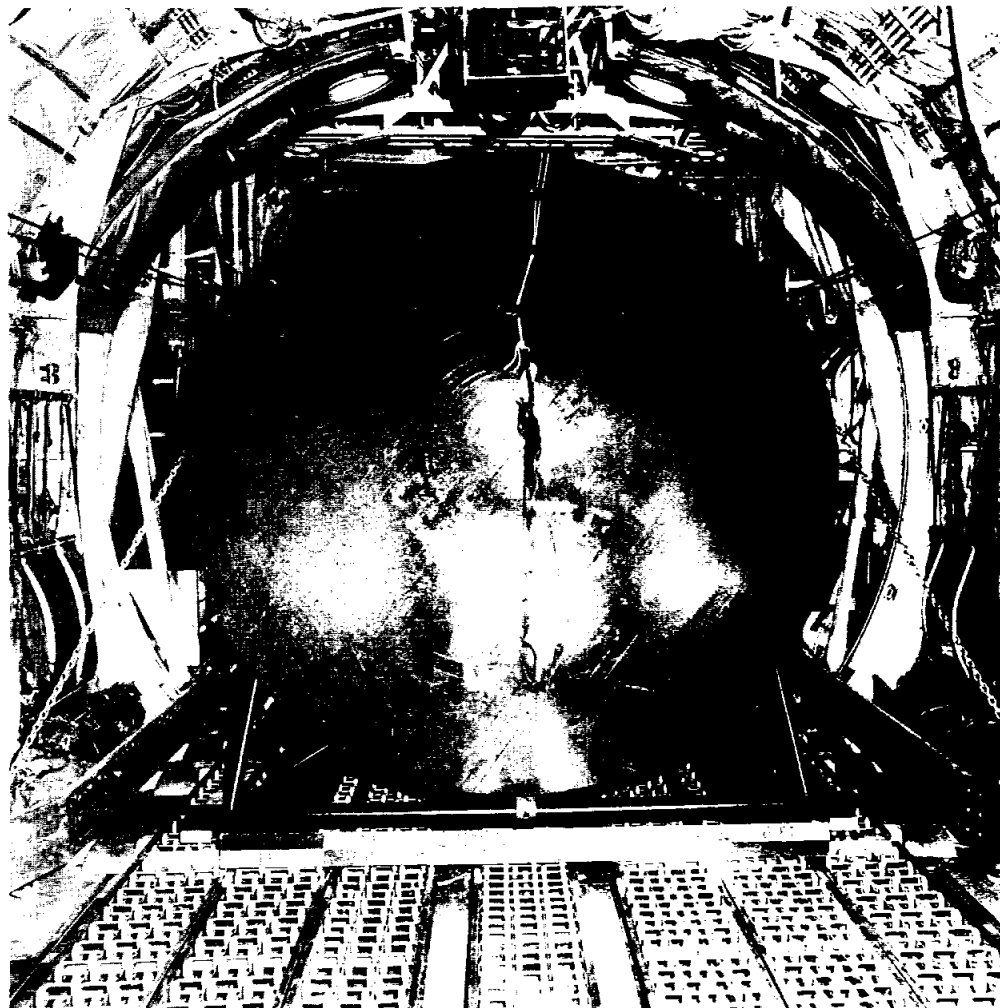
Flight Research at High Altitudes and High Speeds With Rocket-Propelled Research Airplanes. (For presentation at SAE Golden Anniversary Aeronautic meeting, Hotel Statler, Los Angeles, Calif., October 11-15, 1955.)

Williams is married to the former Helen Manning of New Orleans and the couple have three children—Charles Manning, 19, a pre-law student at George Washington University; Howard Lee, 13; and Elizabeth Anne, 9.

His hobbies include model railroading, fishing, and camping.



A VIEW OF THE capsule used in the air drop tests, as seen from the rear of the C-130A.



THE PILOT'S VIEW of the test capsule loaded into the C-130A and ready to go in the air drop tests.

## One of MSC's Early Problems Included Choice of Parachutes

One of the major problems which faced MSC (then STG) personnel after the organization was set in 1958 was the development of a parachute system which would provide the necessary reliability for the ultimate goal—manned orbital flights.

In order to solve this problem a series of tests were determined necessary. Air drops were conducted by Flight Research Division at Langley Research Center to study free fall stability of capsules, parachute shock loads, and pickup techniques.

Escape tests were conducted by Pilotless Aircraft Research Division to investigate capsule motions after stabilization and operation of escape system.

Drogue chute tests were scheduled at the High Speed Flight Station at Edwards AFB to investigate shock loads and opening characteristics.

About one year after this series of tests had been prescribed it was decided that certain tests should be continued for the purpose of providing parachute loads and stability data. These additional tests would incorporate several changes; (1) the drogue chute was to be installed in the capsule with the size of the chute to be determined after results of spin-tunnel tests were known, and (2) it was decided to increase the size of the main chute so that the final impact velocity of the capsule might be kept at about 30 feet per second.

An air drop program utilizing a C-130A cargo aircraft, furnished by the Tactical Air Command, for both high and low altitude tests, followed preliminary drops which were made from helicopters were conducted. The preliminary drops utilized a concrete filled drum attached to the operating canister system and demonstrated the ade-

quacy of the mechanical system of deploying the parachutes.

The low level drops were made in the vicinity of Pope AFB and Fort Bragg, N.C., in order to perfect a means of extracting the capsule from the C-130A, and were made using a full-scale capsule and operating parachute systems.

After the completion of the low level drops, the program moved on to the Research and Development drops made off Wallops Island. These drops, made under the direction of Flight Research Division, were designed to study stability of the capsule during free flight and parachute support, shock input into the capsule by the parachute, and retrieving operations. Four drops were made from altitudes ranging up to 23,000 feet with parachute openings to 15,000 feet.

Major results of these tests were (1) that the information showed that parachute shock landings were low, (2) that the capsule stability in free fall was inadequate without augmentation (3) that with properly designed equipment helicopter pick-up could be utilized in the retrieving operation, and (4) that dropping the heat shield can be hazardous.

A subsequent phase of the air drop tests was planned in order to investigate the stability of the capsule with a six-foot FIST Ribbon chute utilized as a stability augmentation device, operation of the 67-foot extended skirt main chute, and shock loads of the main chute at various altitudes.

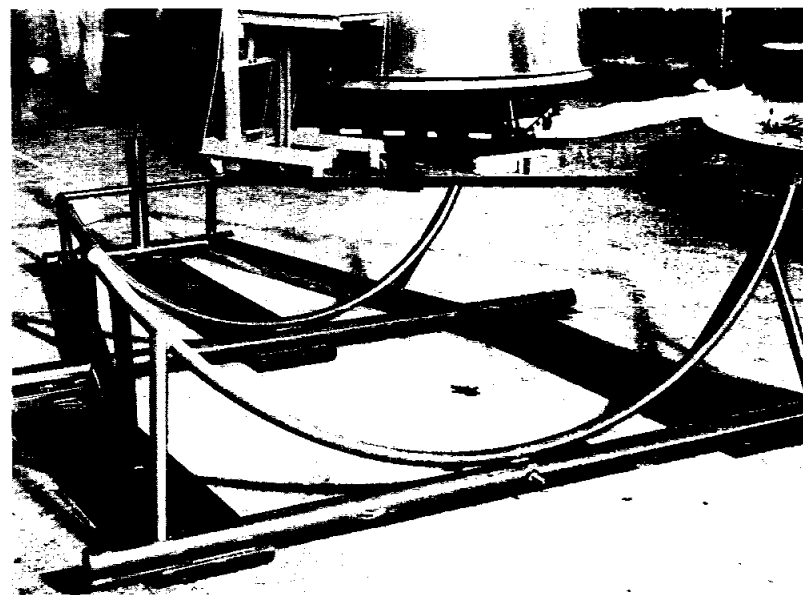
Additional tests, and the information gathered from them, indicated that a different type chute would offer greater reliability and the Ring-Sail type chutes were substituted and the program continued.

The Ring-Sail chute provided the program with required reli-

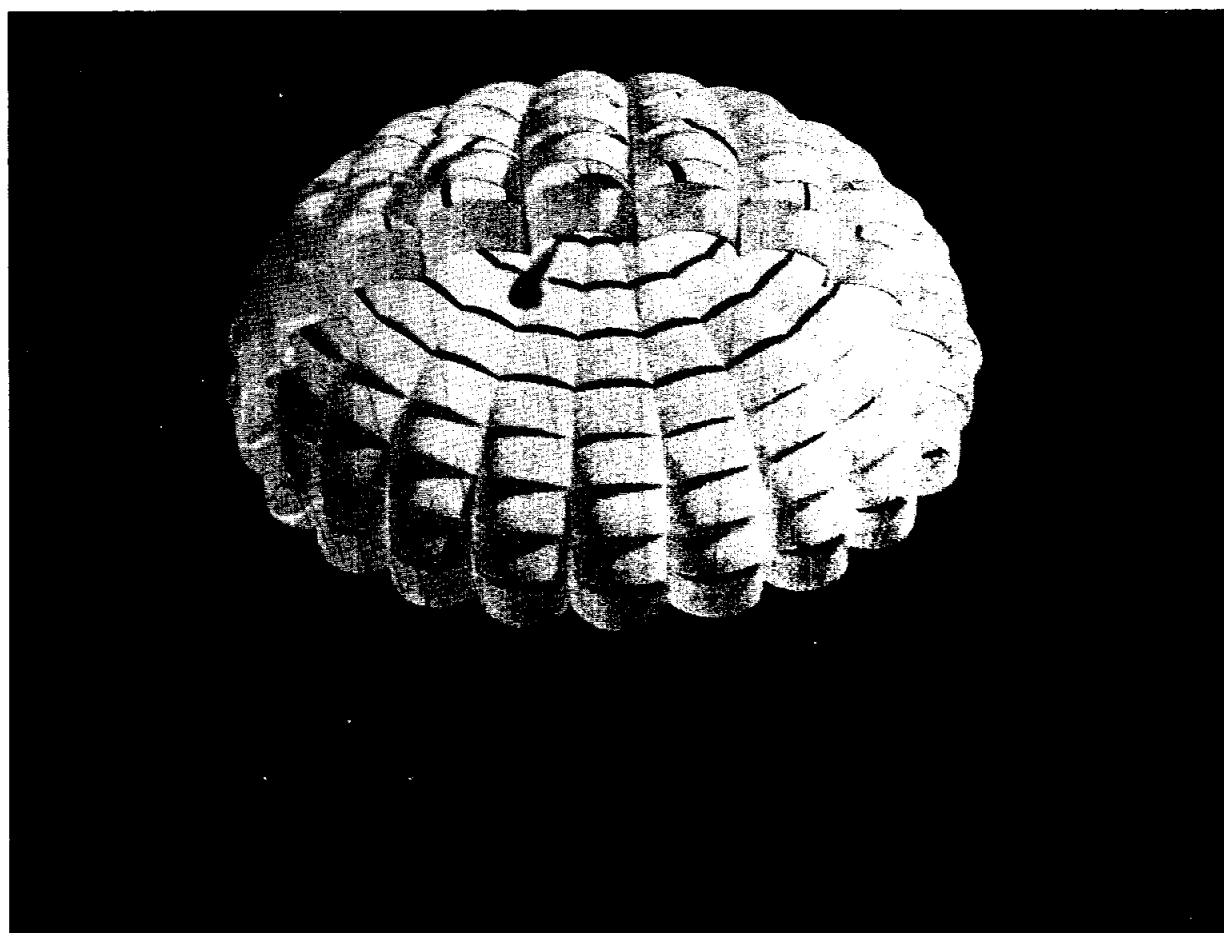
bility and six succeeding drops utilizing the six-foot FIST drogue and the 63-foot Ring-Sail main canopy were all successful.

These chutes are the same used on all Mercury flights to date.

Jerome B. Hammack, Project Engineer, indicated last week that additional tests may be required as MSC enters the final phases of Project Mercury and heavier spacecraft will be utilized. Joe Dodson, Project Engineering Branch, is studying the effect of the heavier 18-orbit capsule weight on the present main parachute.



A PHOTO OF THE dolly used to mount the test capsule on during the air drop tests. The dolly was ejected from the C-130A with the capsule.



THE RING-SAIL PARACHUTE, shown above, was adopted following the air drop tests as the chute furnishing the required reliability necessary to the accomplishment of the mission of Project Mercury.

## Music Hall Attractions Are Listed

The Music Hall in Houston is the scene of many scheduled activities which will undoubtedly attract many MSC personnel and members of their families after they move to the Houston area.

For example a series of six international events is offered with prices ranging from \$12 to \$21 for the entire series which started October 27. The series schedule is as follows:

October 27—First Piano Quartet—Adam Garner, William Gunther, Frank Mittler and Edward Edson.

December 15—From the Philippines—The Bayanihan Review—company of 100 featuring enchanting music and drama.

February 9—From Austria—Vienna on Parade with Captain Hermann's Deutsche Meister Band featured.

February 17—The Robert Shaw Chorale with Robert Shaw conducting soloists, chorus and orchestra—A company of 60 presents in English J. S. Bach's Passion according to St. John.

March 15—The legendary Dancers of Bali with the orchestra of the Tabanan Palace Gamelan conducted by I. Wajan Begeg and Mario and Ketut Witi.

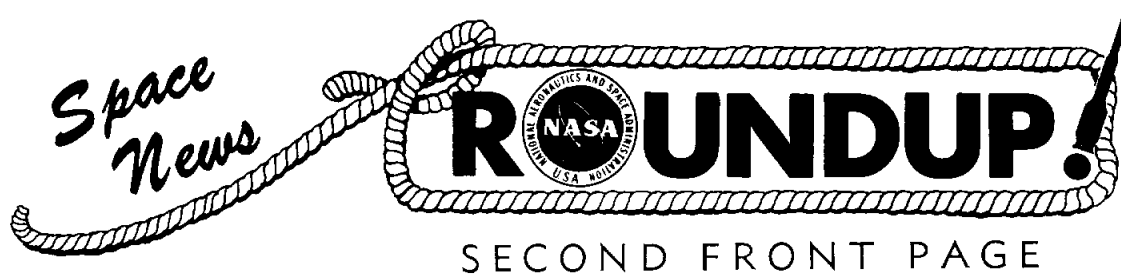
April 13—The National Ballet of Canada.

Other future Music Hall attractions scheduled include:

March 3—Jose Greco and his Spanish Dancers.

March 9-11—Ballet Russe de Monte Carlo.

April 2—"Genevieve-With Love" starring distinguished French artists.



## Welcome Aboard

During the period November 1-7, 1961, the following personnel came aboard:

**FLIGHT SYSTEMS:** Raymond J. Ensley, John P. Hughey, Jr., Carl C. Schneider, Kenneth L. Lindsay, Ernest R. Hilje, Lorick O. Hayman, Jr., Floyd V. Bennett and Robert L. Stubblefield.

**TECHNICAL SERVICES:** Norwood J. Smith, Robert M. Bernardin and Charles C. Wilson.

**PUBLIC AFFAIRS OFFICE:** Edward K. Harrison and Joan B. Downey.

**APOLLO PROJECT OFFICE:** Robert J. Ward, Owen G. Morris and Edward L. Tribble, Jr.

**BUDGET AND FINANCE:** Russell C. Connelly, W. J. Little, Jr., Robert C. Leezer and T. Marshall Wilkes.

**PROCUREMENT:** Charlie T. Slaughter, Donald B. Cherry and Harold J. Ferrese.

**PERSONNEL:** Cynthia L. McKinsie, Evelyn S. Keegan, Sylvia C. Lawler and Ethel L. Forrest.

**ENGINEERING DIVISION:** John E. Roberts, Jr., and Jay A. Solomonson.

**FLIGHT OPERATIONS DIVISION:** David B. Pendley, Robert C. Balentine, Harold E. Perry, Morris G. Mullins and David E. Perreton.

**CONSTRUCTION AND ENGINEERING OFFICE:** Leo T. Zbanek.

**LIFE SYSTEMS DIVISION:** Maurice R. Reumont.

**BUSINESS MANAGEMENT OFFICE:** W. Kemble Johnson.

**DIGITAL COMPUTING GROUP:** Robert L. Pereboom.

## Gilruth Speaks to Journalists About Space Responsibilities

MSC Director Robert R. Gilruth presented a progress report on Manned Space Flight at the 52nd annual convention of Sigma Delta Chi, a professional journalistic society, at Miami Beach, Florida, on October 26. After citing the President's national goal message, Gilruth recalled the organization of Space Task Group in 1958 and pointed up the achievements to date, including the development of management capability for the conduct

of manned space flight research activity, the design and verification in flight of the Mercury spacecraft, the selection of a family of launch vehicles, and the building of a pool of trained space pilots.

Speaking of Project Apollo, Gilruth specified the progress which has been made during the almost two years that project has been underway. He said, "Although we have already made considerable progress in Apollo, there are some extremely complex technical problems to be solved. These are essentially engineering problems rather than unanswered scientific questions."

Among the problems cited were the following:

- Flight performance and reliability.
- Propulsion requirement—earth orbit requires a speed of five miles per second, escape from the earth seven miles per second.
- Development and accomplishment of the flight paths or trajectories involved.
- Achievement of a genuinely

(Continued to page 3)

## 10 MSC Personnel To Attend Joint X-15 Conference

Ten key members of Manned Spacecraft Center's top echelon are scheduled to attend the Third Conference on the Progress of X-15 Research Airplane Projects to be at Edwards Air Force Base, Calif., November 19-21. It will be a Joint Air Force-Navy-NASA conference.

Those scheduled to attend are MSC Director Robert R. Gilruth, Associate Director Walter C. Williams, K. S. Kleinknecht and Marion Franklin, Jr., both of the Office of the Director; B. G. Cour-Palais and B. G. Jackson, both of Flight Systems Division; C. W. Mathews and S. A. Sjoberg of Flight Operations Division, and Project Engineers W. M. Bland, Jr., and J. B. Hammack.

## Reorganization At NASA Hq. Is Described

An article in the October 30 issue of *Aviation Week*, written by Edward Kolcum, describes in detail the changes effected in the higher echelon of the NASA on November 1.

Kolcum in discussing the changes, listed the four major programs offices and their areas of responsibility. They are:

Manned Space Flight, to be headed by D. Brainerd Holmes, who will have five offices. They are Vehicles to be headed by Milton W. Rosen; Spacecraft, George W. Low; Bioastronautics, Brig. Gen. Charles H. Roadman, USAF; Systems Engineering, Dr. Nicholas E. Golovin; and Finance, William E. Lilley.

Advanced Research and Technology, to be headed by Ira H. Abbott and to include all basic work not mission-oriented. Major programs will be Aeronautics, to be headed by John Stack; Space Sciences, Milton B. Ames, Jr.; Nuclear Systems, which includes electric propulsion programs, Harold B. Finger; Research, which includes all basic and state-of-the-art activity, Dr. H. H. Kurzweg; and Guidance and Electronics, Navy Lt. Cmdr. Albert J. Kelley.

Applications, no director named. Major offices will be Space Systems, which are communications, weather and navigation satellites; and offices designed to distribute and exploit for the U. S. Economy the practical benefits of space exploration.

Space Sciences, to be headed by Dr. Homer E. Newell, Jr., with Edgar M. Cortright as deputy. Dr. Newell will direct all scientific satellite and probe problems, and sounding rocket activities.

## Trips May Require Security Clearance

Don Blume, MSC Security Officer, has pointed out that many trips to other NASA installations involve the necessity for special clearances.

Blume requests that all MSC personnel scheduled to make trips which might include any classified activity check by the Security Office at as early a date as possible. This will give the personnel of that office time to call the installation and make the necessary arrangements for proper clearances.

## Recruiting Drive For Scientists, Engineers Starts

The National Aeronautics and Space Administration's nation-wide search for 2,000 talented scientists and engineers began in Chicago, Ill., November 6.

E. J. Manganiello, Associate Director of NASA's Lewis Research Center, Cleveland, Ohio, announced that scientists and personnel team members from all of the Administration's Centers would participate in this talent search in most of the larger cities in the country.

The Manned Spacecraft Center was represented at the meeting by Stuart Clarke and Burney Goodwin of the Personnel Office, Richard S. Johnson of Life Systems Division, and Joseph Piland of the Engineering Division.

During the meeting, plans were made for subsequent recruitment trips to Denver, Colo., Phoenix, Ariz., Cincinnati, Ohio, Los Angeles, Calif., Pittsburgh, Pa., San Diego, Calif., Philadelphia, Pa., Seattle, Wash., Washington, D.C., and Baltimore, Md. The recruiting effort in those cities will take place between November 14 and December 17.

Additional recruiting trips are being planned during January and February and that schedule will be announced at a later date.

## "Chimp - antics"



**DISTINGUISHED PERSONAGES DESERVE** certain privileges and Ham of Mercury-Redstone 2 fame feels that he deserves them. Despite his not wanting his picture taken at the Cape last week, he was taken to the door of the van, but showed his displeasure by baring his teeth at photographer Bill Taub.