Space News
NASA ROUNDUP!
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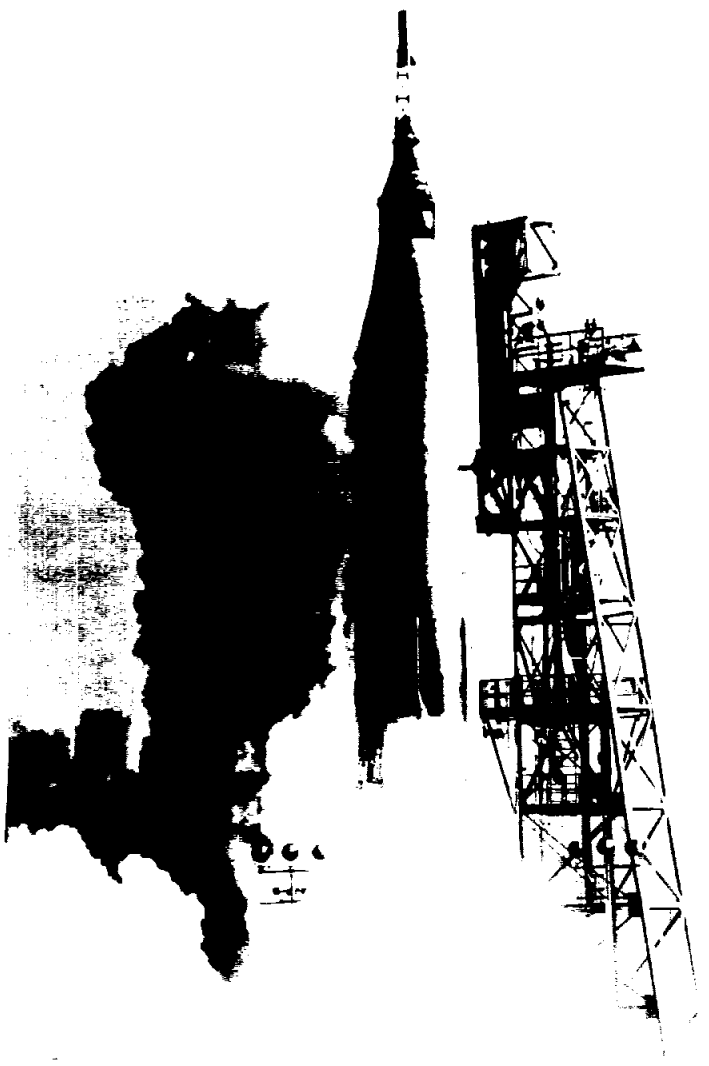
MA-8 Opens Way For One-Day Flight Next Trip

NASA Says Schirra-Sigma 7 Mission 'Perfect'; Reentry Right On Button

In a mission so successful that it virtually eliminated the need for further six-orbit missions and paved the way for a one-day flight, Astronaut Walter M. Schirra gave America its longest space flight to date Oct. 3 and landed less than five miles from the prime recovery vessel in the Pacific.



LIFTOFF! The Atlas launch vehicle thunders upward in a blaze of white heat, carrying Sigma 7 and Astronaut Walter M. Schirra into space, and history. Hours later the MA-8 mission, first six-orbital flight of the United States, was pronounced an unqualified success.

America's first six-orbit mission was termed "perfect" by NASA officials and members of the contract and supporting [illegible]. "This proves what we've been saying," commented D. Brainerd Holmes, chief of NASA's office of Manned Space Flight. "Step by step development is the answer . . . not a matter of breakthroughs but of steady engineering development."

In the two weeks since, Schirra has undergone extensive debriefing periods and a brief appearance in Hawaii; returned to the United States; and been feted with a parade in Houston followed by two news conferences at Rice University, and a dinner given by Rice University President Kenneth Pitzer.

He returned to Cape Canaveral Oct. 9 to work with engineers and scientists in checking the data recorded on the flight.

Monday of this week he went to his hometown, Oradell, N. J. for welcoming ceremonies there and was presented the NASA Distinguished Service Award. He was scheduled for a visit to President Kennedy at the White House yesterday.

Said Associate Director Walter C. Williams, Operations Director of the flight, "So far as the control team is concerned it was perfect. It was fun and it invigorating. Sooner or later I'm going to be tired, but now I'm not."

Williams said the next mission, scheduled early next year, will be a one-day mission, as previously stated, and that the Schirra mission was successful.

Williams said he did not know if any one-day mission will be flown but that the six and three spacecraft now in preparation, although the three may not necessarily be used.

He added that the Sigma 7 flight proved, "we have learned how to better handle temperature control," as well as to conserve fuel, pointing out that prior to going into retrofire there was about 80 pounds left in both manual and automatic tanks of the attitude control system.

Schirra was awakened the morning of the launch by Dr. Howard K. Minners, astronaut flight surgeon, at [illegible]. He was joined for breakfast at 2:10 by MSC Director R. Gilruth, Associate Director Williams, and Dr. [illegible]. The menu consisted of steak mignon, eggs, [illegible], dry toast, coffee and [illegible], the latter a feature of Schirra himself. [illegible] caught the first afternoon.

Minners [illegible] sical examination [illegible] announced that the astronaut was in excellent condition.

Suiting up, arrival at the [illegible] and final preflight checkout [illegible] until shortly before 7 a.m.

Following a 15-minute hold for repairs to radar equipment at the Canary Island tracking station—the only hold encountered since all spacecraft and booster systems checked out perfectly as did the weather, in spite of an earlier tropical storm threat—Schirra was launched at 7:15 a.m. EST.

Nine hours and 13 minutes later Sigma 7 splashed into the Pacific, so close to the prime recovery ship that photographers aboard were able to take their first pictures of an actual descent.

As the countdown was completed at Cape Canaveral, the prime recovery ship Kearsarge waited on the other side of the earth. Groups of young pilots gathered around a radio in the officers wardroom stood in silence through liftoff and the first few minutes of flight, then burst into laughter as the announcement came over the ship's loudspeaker system:

"Now hear this. The astronaut has departed Cape Canaveral for the Kearsarge."

It was a roundabout route: [illegible] trips around. But it was fast. During the flight the Sigma 7 attained a speed of 17,500 miles per hour with an estimated perigee of 100 miles and apogee of 176 miles.

[illegible] return of Schirra and his craft to earth with almost perfect accuracy was an extraordinary tribute to the engineering skills attained by Project Mercury personnel. The spacecraft was spotted from the deck of the carrier as it plummeted toward earth at a speed of 2:10 by MSC Director [illegible] 17,270 miles per hour, trailing behind a vapor trail [illegible]-flying jet aircraft. At 10,000 feet the drogue chute could be seen fluttering [illegible] Sigma 7, and the [illegible] followed visibly at [illegible] abruptly slow [illegible] any doubt [illegible] craft was. The [illegible] station on [illegible] had contact with Sigma [illegible] relay through high-flying [illegible] aircraft from an altitude of [illegible] feet "right down into the water," according to the tracking station manager.

Schirra, in voice contact with the Kearsarge, said from his floating spacecraft that he felt well and would remain inside until he was picked up.

(Continued on Page 2)

THE FAMILY WATCHES, AND WAITS. Schirra's wife, Josephine, 12-year-old son, Marty, and 5-year-old daughter, Suzanne, sat out the flight in their Houston home, following its progress on television. It was late in Houston when Mrs. Schirra spoke to her husband, via radio-telephone, aboard the recovery ship Kearsarge in the Pacific, after his safe return.

Text-Book Flight Near Perfect

(Continued from Page 1)

Almost exactly 10 hours after liftoff, he was piped aboard the carrier in the traditional Navy manner, the hatch was blown, and America's third orbital pilot emerged.

Schirra inspected the Sigma 7 briefly, shook hands with waiting NASA and Navy representatives and acknowledged the cheers of the ship's crew before walking to the sick bay where telephone calls from President Kennedy, Vice President Johnson and the astronaut's wife awaited him.

After a three-day cruise, during which the de-briefing was completed, Schirra was flown from the carrier to Hickam Field Hawaii, and after lunch, boarded a Military Air Transport Service jet for a non-stop flight to Houston, where he was greeting by his family and a small crowd of people at 12:45 a.m., Sunday morning.

Sunday afternoon, October 7, a motorcade left MSC's Houston headquarters at the Farnsworth-Chambers Building to follow a pre-planned route through downtown Houston to Rice University. A crowd estimated at 300,000 by some police officials braved the hot weather and high humidity to get a glimpse of Schirra and others in the motorcade. Included in the motorcade in addition to Schirra and his family were Astronauts M. Scott Carpenter, John Glenn, Gordon Cooper, Donald Slayton, and Virgil Grissom, NASA Administrator James Webb, Congressmen Albert Thomas, Olin Teague and Bob Casey, Dr. Robert R. Gilruth, and other MSC officials.

The MA-8 press conference got underway at Rice at 4 p.m. with Administrator Webb making the opening remarks and introducing Dr. Gilruth. Webb announced the plans for the celebration at Oradell, N. J., and added that on October 25th the annual award ceremony of NASA would be held in Washington.

At that time four awards, in recognition of great services in space technology during the past year, will be made to teams of MSC – the Directorate of Engineering and Development, headed by Max Faget; the Mercury Project Office, headed by Kenneth Kleinknecht; the Preflight Operations Division, headed by G. Merritt Preston; and the Flight Operations Division, headed by Chris Kraft.

In introducing Schirra, Dr. Gilruth pointed out that flights like that of MA-8 are essential to progress in space and require the greatest of efforts on the part of many individuals and organizations. He said they are pioneering flights with considerable element of danger still involved.

Schirra introduced his wife, his son, Marty, his mother-in-law, his parents and his fellow astronauts present. (Astronaut Alan Shepard, who had given the retrofire command from the Pacific Command Ship had not yet returned from his duty station for the flight.)

He then explained the reasoning behind his choice of the name Sigma for his spacecraft. He said: "Sigma 7 is a name to me that connotes an engineering symbol. It is the 18th letter of the Greek alphabet, and it connotes summation . . . Basically, what we wanted to connote with this name was the very many inputs that have been brought forth to develop this flight – the fact that we had previous flights where we needed to make our initial steps into space – the fact that operations analyses of the previous flights, engineering analyses, showed we had to make minor changes to make previous problems straighten out."

He said that the earlier flights – sub-orbital by Shepard and Grissom, and the orbital missions of Glenn and Carpenter – meant much to him in helping him realize what he needed to do to add to the knowledge already accumulated. "Where my knowledge went on was when I finally had my chance to go into space, look around a bit."

Schirra affirmed that the sensations of launch are perfectly described by both Glenn and Carpenter: "The railroad train that you are sitting on really does move out."

He described his activities during the early phases of the flight and said that overall, he thought, it was "a text-book flight."

He mentioned a number of changes incorporated in the spacecraft for his mission.

He emphasized the sense of cooperation between himself as pilot and the tracking range, including Mercury Control Center. "It was a nice feeling to realize that questions I had could be answered; questions they had, I could answer . . ." He spoke of a feeling of "complete control," especially during retrofire.

Of the fuel problem, Schirra said, "My intention was to use so little fuel that no one could argue that we had enough fuel aboard Sigma 7 for 18 orbits if we wanted it. I think I proved that point."

"As far as problems go," he added, there is (one) which we have solved; this was the suit temperature. I have been much hotter in the tent at Cape Canaveral than I ever thought of being in Sigma 7." He said at one point he had such control over the coolant setting he got cold, "the first as far as I know we ever got cold in space."

Attitude control, he said, was perfect.

Schirra Talks On Mission

(Continued from Page 8)

one time when it was not visible from the ground.

Schirra's quick inspection of Sigma 7 as he stepped out onto the number 3 elevator of the carrier Kearsarge was aimed at the replacement patches on the ablative heat shield samples attached to the side of his spacecraft for experimental purposes.

"Unfortunately," he said, "they all looked the same – they all had the same charred appearance and this would take careful analysis that the naked eye could not determine. They all looked good, I might add."

Schirra said he experienced little fatigue during the mission, and did not feel the need for sleep until five hours after recovery. Asked if he thought a two-man, two-week flight would be difficult, Schirra said simply, "We're planning on it."

He said he had food problems only in that it was stowed beyond easy reach. He did not have the crumbling problems encountered earlier. He ate two tubes of food – peaches, and beef and vegetables – and had two containers of "dessert type" food cubes. The latter he was unable to reach.

The pictures he took with the special hand camera provided were minimal, Schirra said. He was busy during the first orbit with suit circuit and evaluation of control systems, and later had few opportunities to take pictures. "I never saw so much weather," he said.

The countdown on MA-8, said Schirra, "was a real dream," in its smoothness.

Schirra said he did not see the Echo balloon satellite, but added that he was not willing to use extra attitude control fuel to look for it.

In answer to newsmens' questions, the astronaut said the exhaust from the tower rocket did cloud his window but only to a very slight degree, "much like you see on a dirty windshield before you get a tank of gas."

Only one object showed up drifting about the cabin during weightlessness as various debris has done in past flights. It was "a very minute little washer . . . Gordon Cooper has it in custody and I am going to present it to my capsule engineer when he gets back to the Cape."

Schirra said a cosimeter, a radiation measuring device, showed less than .1 of one roentgen of radiation present. "We did not anticipate radiation as a problem and as it turned out, we had less than I have in my wrist watch."

Of the use of the periscope, Schirra said, "I almost launched without a periscope on this flight and would launch again without a periscope. I did use (it) very often. We felt that it was best to take (it) along and put to bed once and for all whether we needed it to acquire attitudes or whether we could (do that) exclusively with the window. I will state now that there is no requirement for the periscope."

Schirra said he thought the necessity of sleep on long missions would be no problem, since uncontrolled drifting flight has not proved a problem at all, though used extensively on MA-8. He said various audio alarm devices could be built into the spacecraft systems, as some already had been.

Welcome Aboard

(Continued from Page 8)

Nutter, Richard T. Alexander, Carol A. Alley, Nita S. Bouldin, Resa M. LaGarde, Patricia R. Skinner, Alice S. Buckner, Lawrence V. Niemann, Kenneth T. Kohrs, Kay F. Goodman, Aubin O. Ferguson, Penny J. Pizzo, and Charlene Stroman.

Facilities: William Kutalek, Jr., Ben R. Hand, and O'Dell A. Crow.

Technical Services Div: Norman H. Gabbard.

Administrative Services Div: Corinne M. Stoneking, Virgie L. Wade, Lenora F. Guin, Gloria D. Reichie, Betty R. Schick, Carole A. Bourdreau, Judith E. Foulds, Barbara L. Laws, and Margaret R. Harris, and Lola Morros, (Cape Admin. Office).

Asst. Dir. for Administration: Frank E. Clark, and Rudolph G. Gerdin.

Flight Operations: Jerry E. Hoisington, Ryborn R. Kirby, Bruce M. Wood, Thomas F. Carter, Jr., James M. Sulester, and Lee R. Foster.

Data Computation Division: Wanda S. Slack.

Systems Evaluation and Development: Jerome H. Vick, James H. Watts, and Carlisle C. Campbell, Jr.

Financial Management: Curley J. Dartez, Zell W. Farris, Clarence K. Fleming, Laura N. Jacobs, Marian C. Silmore, James F. DeMuth, Bobbie J. Cutbirth, Martha J. Hilbig, Vira M. Henry, Edward L. Nunley, Patsy R. Cox, and Marie G. Storey.

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Photographic Services Div: Everette V. Richardson, Jr.

Personnel Division: Daryl G. Kanoff, Mary E. Rochelle, and Ruby L. Spence.

Management Analysis Div: Joseph L. Steele.

Technical Information Division: Dan M. Moody, Stephanie J. French, and Margaret M. Crowthers.

Mercury Project Office: William R. Kelly.

Spacecraft Research Division: Claud Edmiston.

Health & Safety Office: Charles P. Bergtholdt.

Aerospace Medical Operations: Judity B. Banks.

Public Affairs Office: David L. Schwartz.

Spacecraft Changes Helpful

(Continued from Page 8)

HF transmissions from Sigma 7 must be reduced later from postflight data. I felt on occasion that I was raising stations earlier than I had anticipated. But I'm convinced we really are making progress on communications with this antenna.

Temperature sensing instruments have been attached to the center of the metal dome on the heat exchangers of both pressure suit and cabin environmental control system. A direct reading temperature guage gives the pilot a continuous reading on both cooling devices during flight. Schirra commented that the device gave "a very accurate readout on the suit temperature circuit."

Other temperature pick-ups were installed on the cabin heat exchanger outlet and the inside of the suit circuit where oxygen flows into the suit.

The addition of a temperature-survey indicator and a 12-position rotary switch to let the pilot monitor heat exchanger air outlet temperatures, 3-inverter temperatures, right retrorocket temperatures and thruster temperatures completes the new system.

In other changes, leg support troughs have been eliminated from the astronaut's couch inside the spacecraft cockpit. A lateral knee support consisting of plates outside of each knee, to keep the knees from spreading outward during acceleration, has been substituted. The plates can be locked into place or retracted at the pilot's descretion.

Commented Schirra, "This gave me quite a bit more room to move my legs around. In fact, I could sit in there while waiting during the countdown period with my legs corssed."

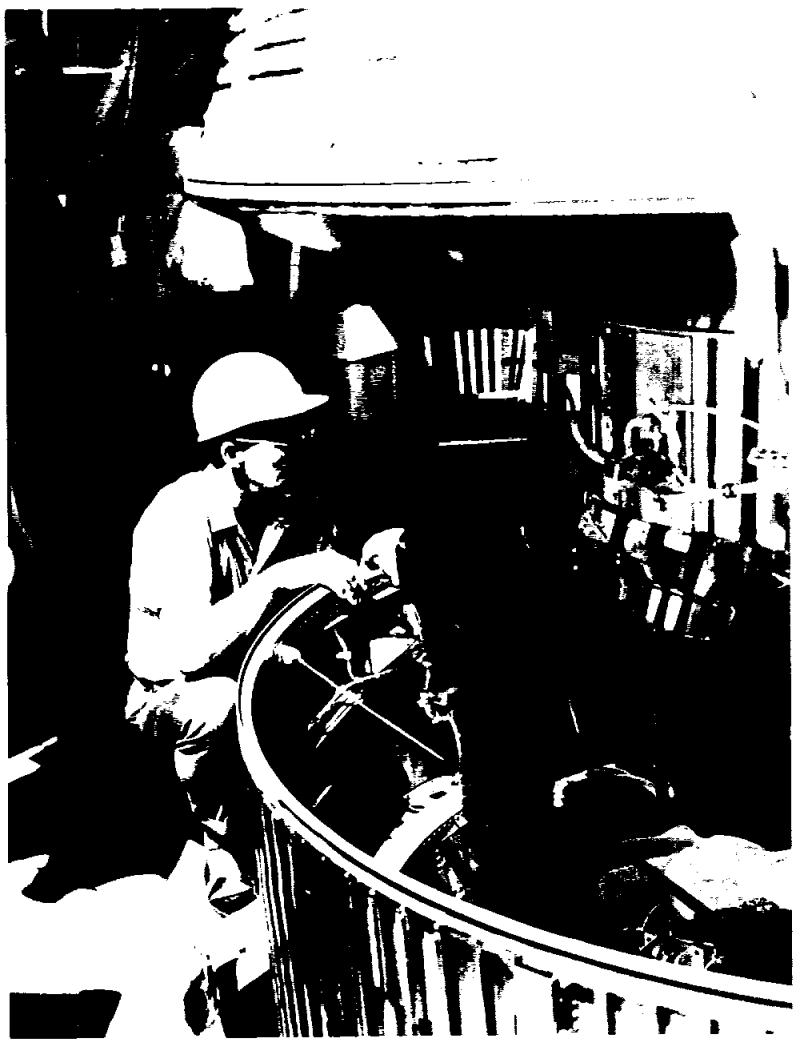
The small toe cups of earlier spacecraft have been replaced by a larger cup, and the heel support built up to provide restraint for the lower legs and feet.

These changes were designed to afford greater mobility, improved circulation and permit easier access and egress from the spacecraft.

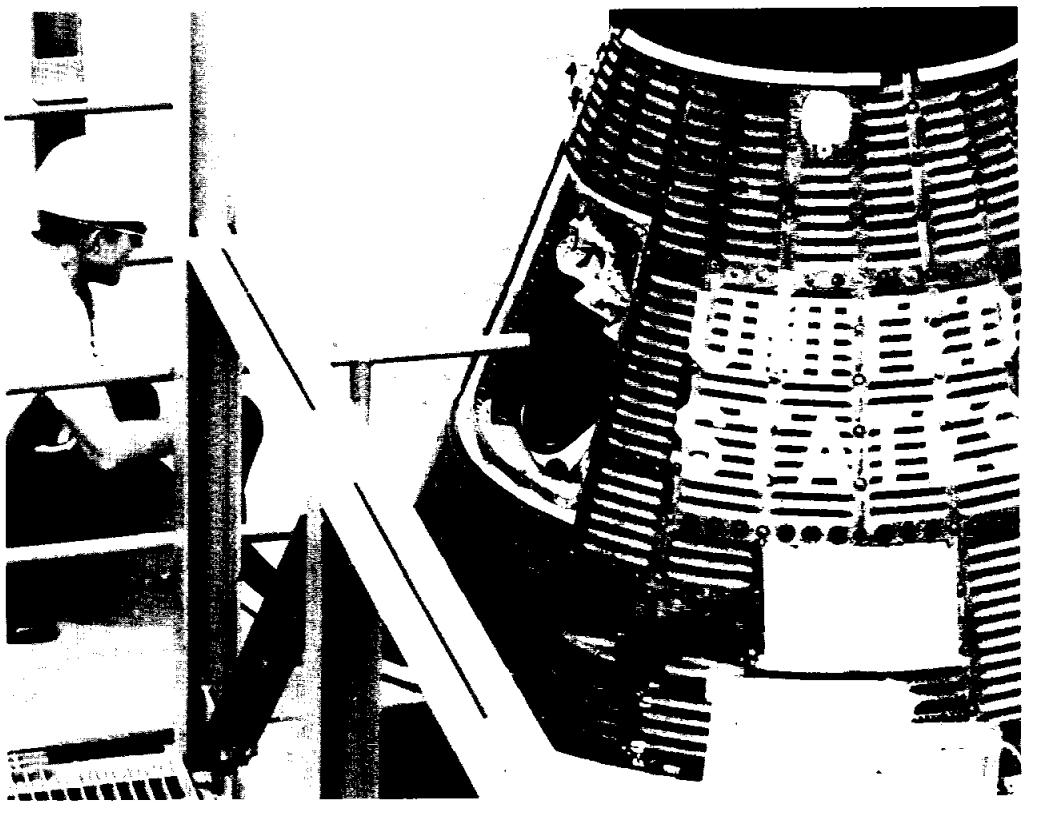
The magnetic tape used in the spacecraft has been changed to a thin-base type which increases the possible recording time from six to eleven hours.

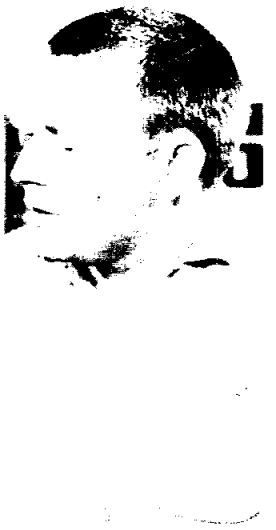
Schirra also spoke of increased readouts on the electrical system.

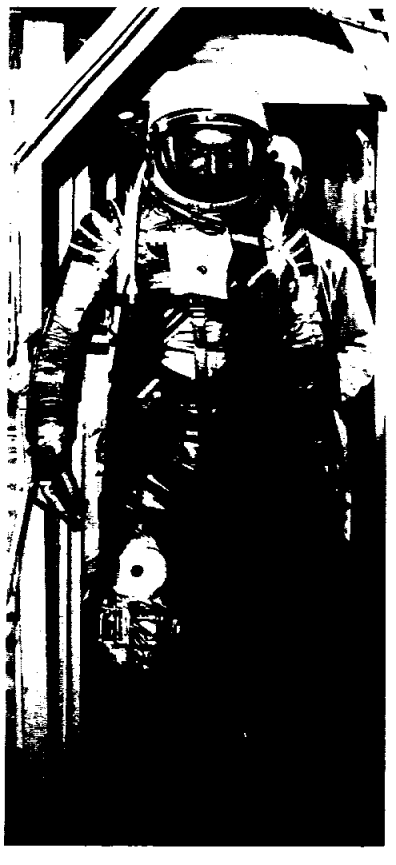
He mentioned an "attitude select" switch that allowed him to select either reentry or retro attitude, during flight "which meant I was flying at zero pitch."



TIME GREW SHORT as MA-8 pilot Walter M. Schirra, Jr. watched his Sigma 7 spacecraft remated to its Atlas launch vehicle (left) following repairs which caused the only delay in preparations for the flight. With his back-up pilot, Astronaut Gordon Cooper, Schirra made final studies of mission maps (right) and spent a large part of his time riding back and forth to Pad 14 in the slow-moving transfer van (below, left) for simulated flights and test runs (below, right). There were new pieces of equipment to become familiar with, such as the special hand-held camera (bottom left) on which Schirra and Astronaut "Deke" Slayton (standing) were briefed by Roland Williams, who performed the modifications. And finally there was the flight plan to cover again with Flight Operations Chief Chris Kraft in Mercury Control Center, (bottom, right). Preliminaries seemed endless, but time passed swiftly for the pilot and the Mercury team. That it was well-spent was evidenced by the smoothness of the countdown, once started, and the near perfection of the flight itself.

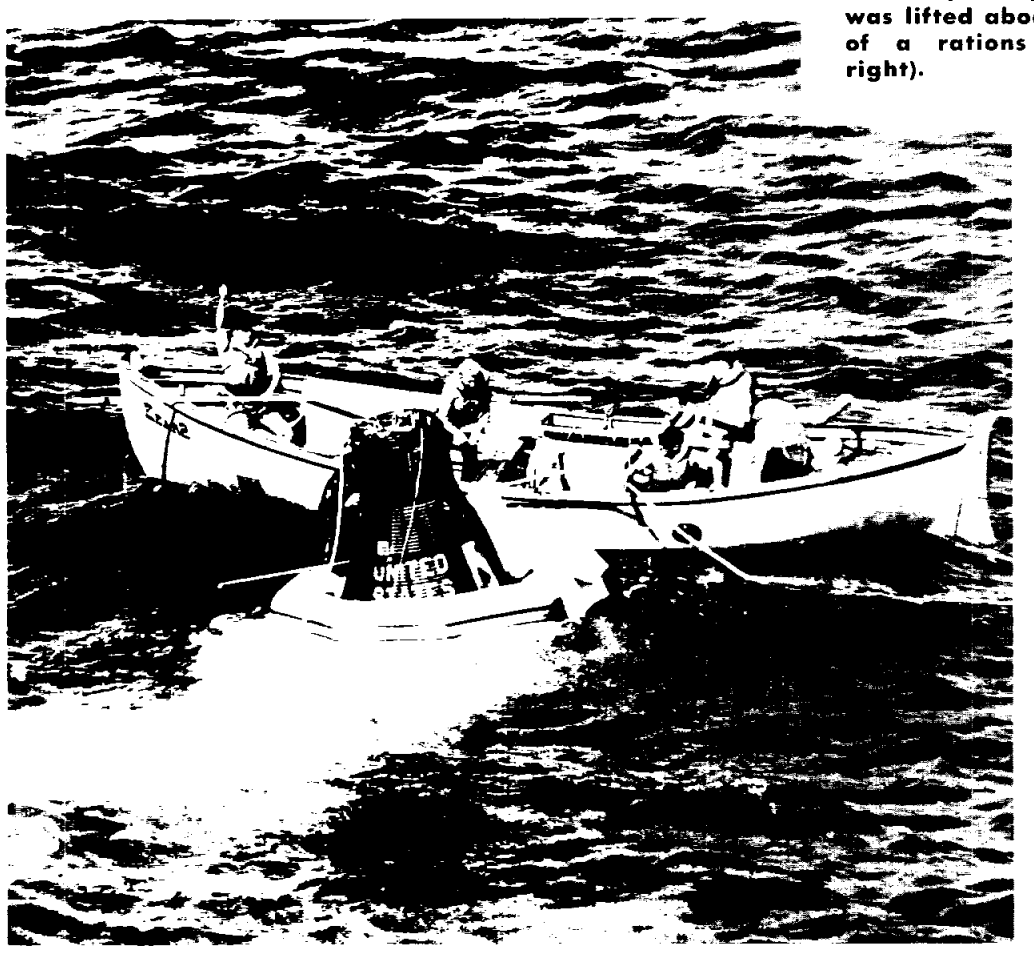


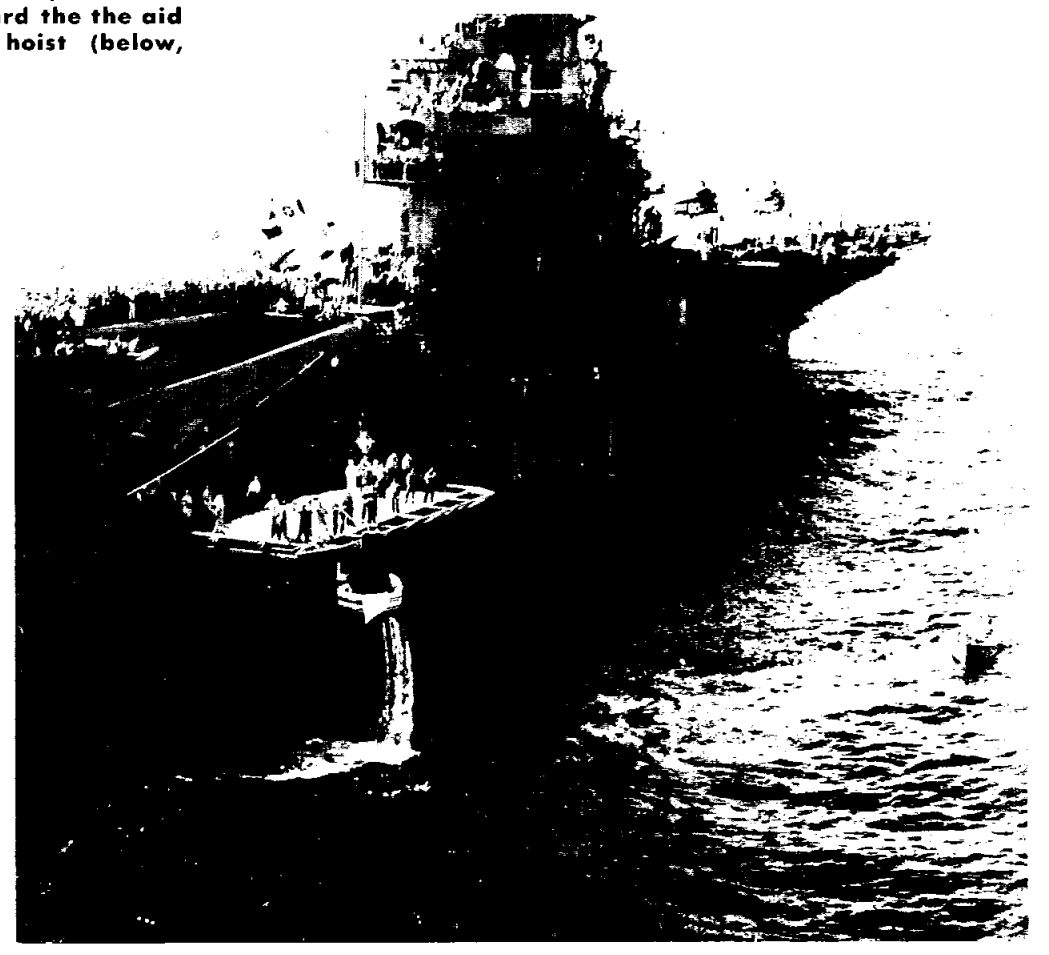


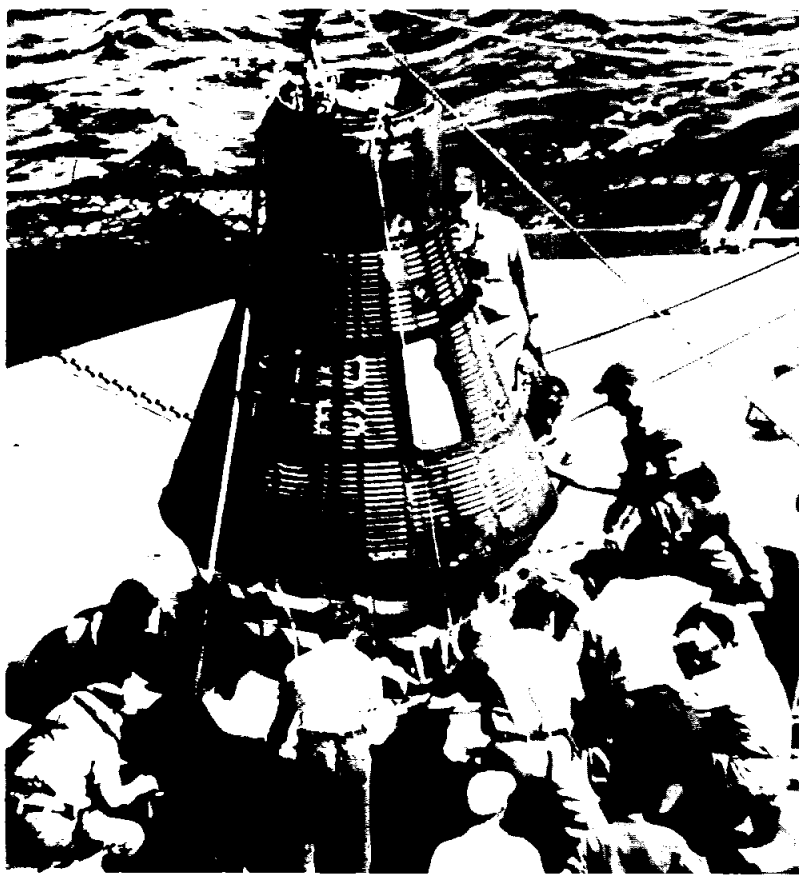


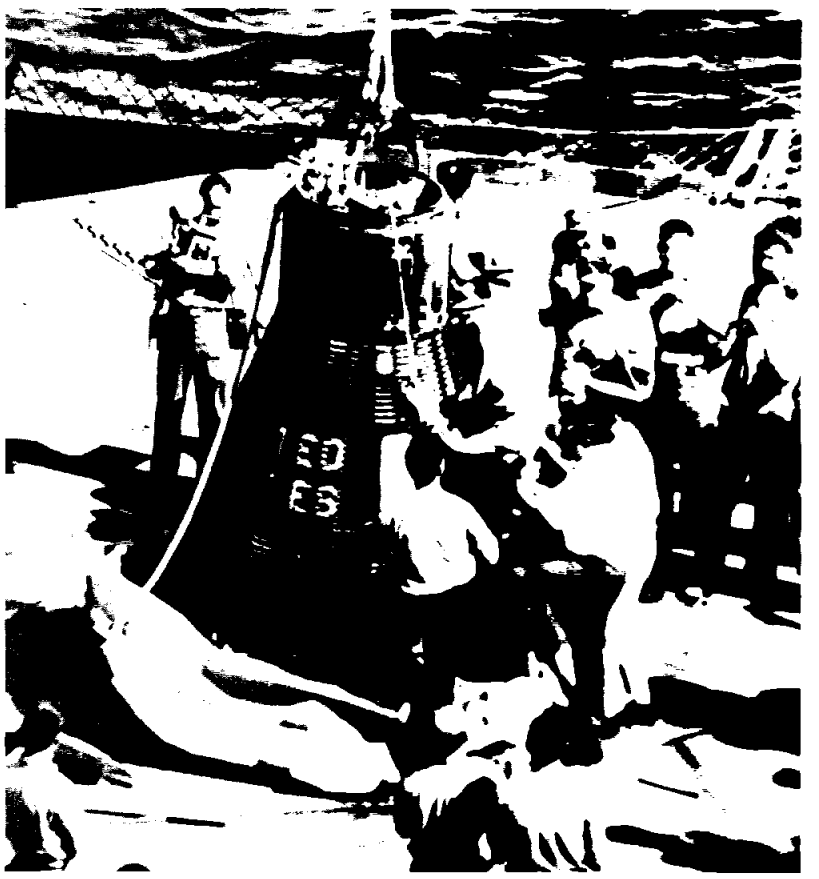
SUITING UP at 3:25 a.m. the morning of the flight, MA-8 pilot Walter Schirra is zipped up by suit technician Al Rochford (top, left) immediately after a final medical check preceded by breakfast. A short discussion with Astronaut "Deke" Slayton (top, right), on with the helmet, and Schirra was ready. A few minutes after 4 a.m., Schirra left Hangar S (above, left) and headed for the transfer van which would take him to Pad 14 and the waiting Sigma 7, followed by Dr. Howard A. Minners, astronaut flight surgeon, Rochford, and suit technician Joe Schmidt. The unit in his hand is the portable air conditioner for the pressure suit. The short trip in the slow-moving transfer van takes about 20 minutes. At 4:24, Schirra stepped out at Pad 14 (above, right) and entered the gantry elevator for the eleven-story ride to the top of the Atlas launch vehicle. It was just 4:39 a.m. when he stepped from the gantry elevator to the hatch of Sigma 7, just out of sight to the right of the picture at left. Back-up pilot Gordon Cooper followed him through the gantry and assisted Schirra into the Sigma 7 (right), where Schirra lay on his back for the more than two hours required to complete final instrument checks before the flight. Lift-off occured at 7:15 a.m., and Schirra disappeared from direct human vision for nine hours and 12 minutes until Navy frogmen caught a first glimpse through the hatch of the floating spacecraft. On the other side of the globe, the public address system aboard the prime recovery ship announced, "The astronaut has departed Cape Canaveral for the Kearsarge." It was a long trip, but a fast one. Sigma 7 traveled about 160,000 miles during her six orbits and attained a speed of 17,500 miles per hour.

SPLASHDOWN, DEAD CENTER! Nine hours and 160,000 miles after liftoff, watchers aboard the prime recovery vessel Kearsarge, underway 270 miles northeast of Midway, caught a glimpse of what looked like a jet contrail high over the earth. Seconds later photographers were frantically taking advantage of their first chance to get pictures of an orbital spacecraft in actual descent (top row). Swinging gently under its peppermint-striped parachute, Sigma 7 splashed into the Pacific less than 9,000 yards from the carrier, a breath-taking bullseye which officials said was within 10 miles of dead center of the target area. Helicopters scrambled from the deck of the Kearsarge and dropped a team of Navy frogmen 15 feet into the slow swells to fasten a floatation collar around the spacecraft, silhouetted against its own smoke marker (left). A motor-whaleboat, put over the side to assist them (right), attached a rope to the spacecraft and towed it to the approaching carrier (below, left) where it was lifted aboard the the aid of a rations hoist (below, right).







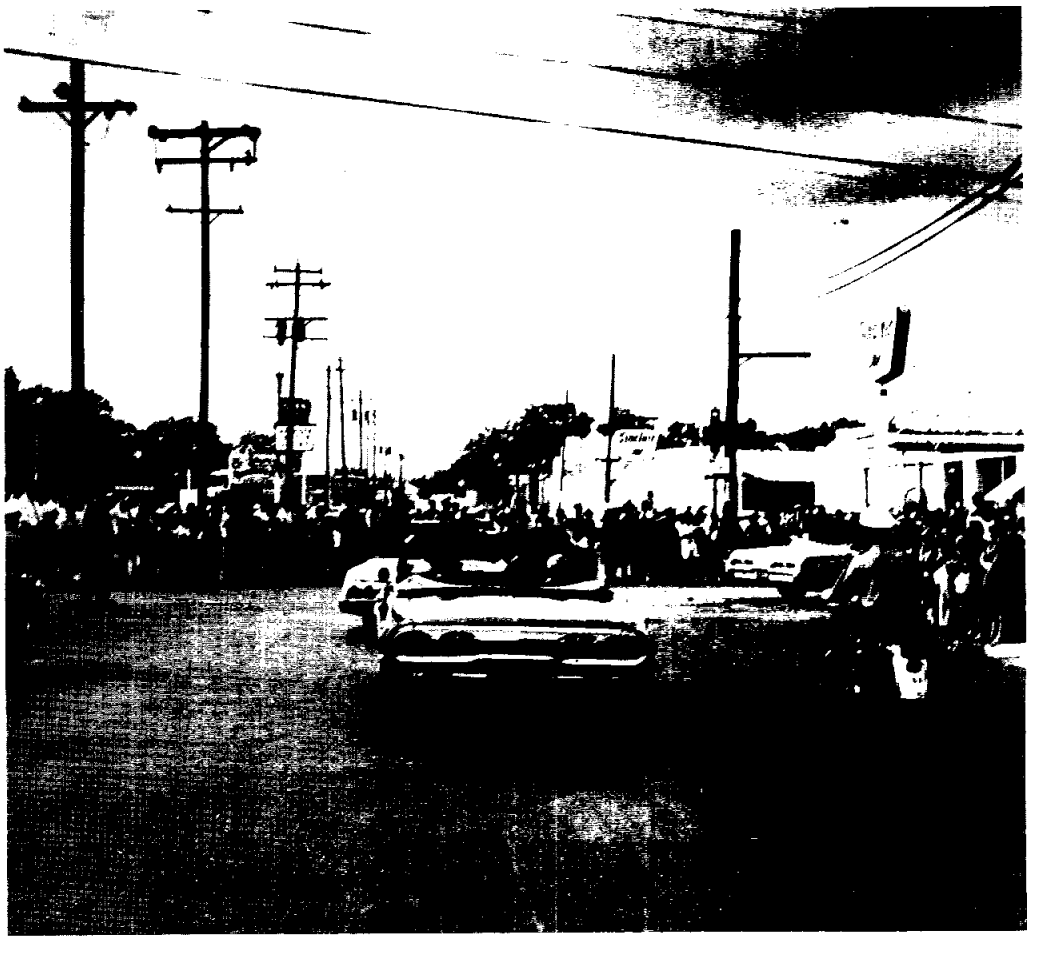


SCHIRRA REMAINED aboard Sigma 7 as the spacecraft was hoisted and lowered to cushioning matresses atop a wooden frame on elevator number 3 (left). The hatch was blown and the Navy commander was assisted from the spacecraft (right) and piped aboard in the traditional manner. "I feel fine," he answered queries from several thousand cheering sailors, after pausing a moment to inspect his craft (below, left). Before being assisted from his pressure suit (below, right) he walked to the ship's sick bay where calls from President Kennedy, Vice President Johnson, and Schirra's wife, Jo, awaited him (bottom, left). "It was a good bird," he told newsmen as a medical debriefing team prepared to put him through a series of post-flight tests (bottom, right). "I'm happy as a lark." His joyful grin had already given that piece of information, away, but Schirra's blythe acknowledgment of the success of his mission goes a long way toward strengthening the confidence of his Russian-worried countrymen.

ONLY CHANGE in Schirra's near-perfect physical condition was a skinned knuckle (top, left) acquired when he rapped the detonator on the escape hatch after recovery—the same injury John Glenn displayed after his flight. A modified calorie test in which the ear is irrigated for 45 seconds with gradually cooling water, and the time of onset of nystagmus (fine eye jerk) noted, found no change or difficulty in the balance mechanism of the ear (top, right). Schirra spent the next three days talking with other MSC personnel aboard the Kearsarge, such as MSC Associate Director Walter C. Williams and Astronaut Deke Slayton, (above, left); getting his exercise on the hangar deck of the big carrier (above, right); eating in the officers' wardroom with the ship's crew (left) and attending extensive debriefing sessions with key members of the Mercury team (right). Meanwhile, the Kearsarge held a steady course for Pearl Harbor, Hawaii, Schirra's next stop.

FOLLOWING THREE DAYS of debriefing aboard the Kearsarge, Schirra, joined by five other astronauts who had flown to the ship from Cape Canaveral via Midway (above, left) departed for home but stopped in route for 3 hours at Hickam AFB, Hawaii. Eight-year-old Kalani Flood (above, right) gave him the traditional island greeting with a bright red double carnation lei and a kiss. At left, Schirra chats with Episcopal Bishop Kennedy. A light rain was falling during the luncheon held at Hickam. When asked if "there isn't something you can do about this rain," Kennedy quipped, "My business is sales, not operations." At right, Schirra shakes hands with Pacific Air Forces commandant Gen. Emmett O'Donnell, Jr., his host for the luncheon. Below, left, is Hawaiian Governor William Quinn with Astronauts Slayton, Carpenter, Glenn, Schirra, MSC Associate Director Walter C. Williams, and Astronaut Cooper. The shadow on Cooper's coat is that of Astronaut Gus Grissom just out of sight at right. Below, right, Schirra waves to a crowd of some 2,000 which greeted him at Hickam AFB.

SCHIRRA'S TRIUMPHAL return to Houston began in the wee hours of Sunday morning, Oct. 7, when his plane landed at Houston International Airport. Above, Mayor and Mrs. Louis Cutrer (center couple) chat with the astronaut's parents as they await Schirra's arrival. Above, right, Schirra's son, Marty, wife, Jo, and daughter, Suzanne look expectantly for the head of the family. He came at last, (left) in company with five of the other astronauts. A present for Jo Schirra was the lei from Hawaii (right). The following afternoon, the astronauts and their families gathered at Farnsworth Chambers Building where the children met Jay North, star of "Dennis the Menace" TV show, who was in Houston to kick off a savings bond drive. Below, left, are Scott and Mark Grissom, Jay, (in pressure suit), Marty Schirra, Laura Shepard, and Suzanne Schirra (in front of Laura). The parade began at Farnsworth Chambers and proceeded down Telephone Road to South Wayside (below, right), over to Gulf Freeway and to Rice University.



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

Director . . . . . Robert R. Gilruth
Public Affairs Officer . . . . . John A. Powers
Chief, Internal Communications . Ivan D. Ertel
Editor . . . . . Anne T. Corey

As is the custom following manned space flights, a number of telegrams have been sent to the astronaut involved and to other key personnel. The following messages are samples of the many types received.

Commander Walter Schirra
Cape Canaveral, Fla.

I wish to join in admiration for your skill and courage which has added luster to our country.

Herbert Hoover

* * *

Commander Walter Schirra
Port Canaveral, Fla.

The hearts and minds and prayers of the people of Oradell rode with you this day. Thank God for your safe return. We are extremely proud of your accomplishment and breathless with excitement as we stand in the spotlight with the eyes of the world upon us. It is our hope that while we bask in the reflected glory of your great contribution to science, we will conduct ourselves in such a manner so that you will be just as proud of Oradell as Oradell is of you. We look forward to seeing you soon.

Fred Wendel, Mayor

* * *

Commander Walter M. Schirra
Cape Canaveral, Fla.

Congratulations. The people of Bergen County are most proud of you and your accomplishment in behalf of the free world. We are all looking for you to stop in your old home town.

Assemblyman F. Walton Wanner

* * *

Astronaut Walter M. Schirra, Jr.
Cape Canaveral, Fla.

The City of Goldsboro, North Carolina, and the Kitty Hawk Flight Order of Daedalians say well done, congratulations, and thanks.

Scott B. Berkeley, Mayor and Flight Captain Kitty Hawk

* * *

Commander Walter Schirra
Cape Canaveral, Fla.

Toastmasters in 45 countries and territories throughout the free world have evaluated your performance today and have judged you the best speaker of the day. Your effective communication from outer space has thrilled your many friends in Toastmasters and we congratulate you, a former Toastmaster, for your history-making achievement.

Frank I. Spangler, President
Toastmaster International

* * *

Walter Schirra
Cape Canaveral, Fla.

The pride of the people of Cheraw, the prettiest town in Dixie, is doubled by the fact that the name of our town is pronounced similar to that of yours, Walter Schirra. The hearts and hopes of Cheraw, as well as that of the free world, ride with you.

Cheraw Jaycees

* * *

And there were fans from foreign countries:

Fregattencapitaen Walter Schirra
Weltraumbehoerde der Vereinigten
Staaten von Amerika

Herzlichen glueckwunsch zum weltraumflug und gluecklicher landung.

Theo Schirra, Schwerin Mecklenburg

Cosmonauta Walter M. Schirra
Sigmar 7, N.A.S.A., Cape Canaveral

Loco e ticino giubilano per meravigliosa impresa loro concittadio e fanno voti per un completo successo. Auguri Walter.

Popolaizone di Loco

* * *

And requests from baseball fans:

Commander Shorty Powers
NASA, Cape Canaveral

Request Schirra be returned from orbit before start of Giant Dodgers game.

Robert M. Walp

* * *

And Schirra even gave a shot in the arm to the United States Savings Bond drive. A total of 265 Floridians from Miami, Jacksonville and Pensacola sent congratulatory wires, stating they would buy an extra savings bond this year as a tribute to him and his Sigma7 flight.

EDITORIAL EXCERPTS

Los Angeles Herald Examiner
Oct. 4, 1962

'GREEN AND GO'

An American named Walter M. Schirra, Jr. put in a nine-hour plus working day Wednesday. He circled the world six times at 17,500 miles an hour, traveled 160,000 miles, splashed down to a virtual bullseye landing in the Pacific, and earned $35.31 in Government pay. He did not demand time-and-a-half for overtime.

To use a spaceman's phrase, it was "Green and Go" all the way in the longest and smoothest journey by an American astronaut. Cmdr. Schirra is a "Green and Go" guy, as are the companions who preceded him in thrusting into the fantastic new dimension, and as are the companions who will follow him in the conquest of space.

Our spacemen are an elite brotherhood, not in the Old World sense of being socially superior, but in the sense of being joined by meticulous training, courage and dedication. They are the first to acknowledge that their fraternity exists by reason of the labors of hundreds of scientists and technicians joined in an equal dedication to vault American prestige toward the distant planets.

Well, Cmdr, Schirra gave us some cheering and inspiring hours. As a matter of fact, these creaking editorial bones of ours feel a touch of "Green and Go" too.

The MSC Relocation Office announced last month that a total of 1,116 chest X-rays were made of MSC personnel during the Houston TB Association's mobile unit visits to all MSC sites in September. Of those, only three were reported "suspicious." One abnormal heart shadow was discovered and four x-rays showed non-TB pathology.

MSC PERSONALITY

Jack C. Heberlig One Of First In NASA Space Task Group

Jack C. Heberlig is what Madison Avenue likes to call a "rising young man." Only 27 years old, he is the assistant for manned spacecraft technology in the office of Assistant Director for Research and Development Maxime A. Faget.

He was one of the "original 35" listed on the NASA memo dated November 5, 1958, which detached the first group of personnel from Langley Research Center "to implement a manned satellite project" and designated it the Space Task Group.

Born Aug. 22, 1935 in Oakville, Penna., Heberlig received his B.S. in Education from State Teachers College in Shippensburg, Penna., in 1957.

In June of 1957 he began as an aeronautical research intern in the heat transfer section of the Pilotless Aircraft Research Division (PARD) at NACA, Langley.

Specifically, he was assigned to a project for the study of one phase of the heating of the Atlas intercontinental ballistic missile. By April of 1958 he was engaged in working on a full-scale mockup of a manned reentry capsule.

Under the direction of Faget and R. O. Piland he pioneered in the support system which would allow a space pilot to sustain the high forces of return from orbit in a simple drag vehicle.

Heberlig was directly involved in the first tests of the form-fitting couch in the centrifuge at the Aviation Medical Acceleration Lab, Johnsville, Pa. These tests established for the first time the fact that a human being could withstand pressures up to 25 G's.

When NACA, Langley, became NASA, LRC, and the Space Task Group was detached to work directly under NASA Headquarters, Heberlig was capsule system engineer and an assistant Redstone system engineer.

In addition, he was coordinating activities of the Air Force School of Aviation Medicine in the utilization of animal packages in the "Little Joe" phase of the program. He was division project engineer for the environmental testing of a production Mercury capsule on a static fired Redstone booster.

Transferred May 1, 1960 to the Office of the Director, he spent "a couple of years" as technical assistant to Dr. Robert R. Gilruth, then director of Project Mercury, consulting with project management staff, preparing technical correspondence, undertaking various specialized technical studies, and preparing information for reviews and briefings to Washington personnel and other groups, presentations and bidders conferences.

Jack C. Heberlig

When MSC transferred to Houston, Heberlig took over his present position in the office of the assistant director for research and development.

Manned spacecraft technology has to do with defining the criteria—objectives, basic principles and methods—for a manned spacecraft program in advance. It is a kind of "crossing bridges before you get to them"—or rather, making sure the bridge is there when it is needed.

"We must know ahead of time what tasks and problems to get ready for—what we will need to meet them, and what things will feed into the program," Heberlig says. "We have to determine how far ahead we can project the state of the art. We must program work loads and coordinate with other centers on what we expect of them. We must give our contractors support in pursuing their respective problems in the field—anticipate them if possible."

Heberlig and his wife, Ruth, have two children, a daughter, Susan, 3½, and a son, Jack, Jr. born in August.

Like many another MSC employee he has not had much time lately for his hobby, hunting, ("I got in one day last season.") Right now his hobby might be considered house-building.

A PRESS CONFERENCE at Rice University and a dinner at the Rice Faculty Club completed welcoming ceremonies in Houston for Schirra. Above, left, the motorcade from Farnsworth Chambers Building nears Rice University, where MSC Director Robert R. Gilruth, Astronaut Schirra and NASA Administrator James E. Webb hold the platform for a 4 p.m. news conference on MA-8, (above, right). At left, Schirra and his wife, Jo, followed by five of the other six astronauts and their families (Alan Shepard had not yet returned from his MA-8 duty station on the Rose Knot, off Guam) enter the Rice Faculty Club. A buffet-style dinner found Schirra following Secretary of the Navy Fred Korth through the line (right) and later (below, left) sharing a table with Mrs. Schirra, NASA Administrator Webb, Rice University President Dr. Kenneth Pitzer, and Secretary Korth (back to camera). Below, right, Administrator Webb chats with the elder Schirra's.

SOME DAY, THAT WILL BE ME. . . . Eight new members of the flight crew personnel recently chosen by MSC watched the MA-8 launch, the first since they were chosen, outside of Mercury Control Center. Left to right are Neil A. Armstrong, Frank Borman, James A. Lovell, Jr., Thomas P. Stafford, Charles Conrad, Jr., Edward H. White, II, and James A. McDivitt. Kneeling is John W. Young.

Pilot Discusses Events, Performance, Observations Of Six-Orbit Mission

America's third pilot in orbit thinks man will be able to sleep safely in space during long missions; that John Glenn's glowing green particles and Scott Carpenter's white "frost" were the same objects, seen respectively at sunrise and in full daylight; and that the detailed engineering performance data acquired during his mission will leave more room for observation experiments in later missions.

Asked if he had any recommendations for changes in the MA-9 spacecraft, Astronaut Walter M. Schirra, Jr. merely said: "Just move up its launching date."

The comments came as part of the question and answer period during a post-flight press conference at Rice University Oct. 7.

Other points that came out during the conference:

A spacecraft in free flight has a very slow drift rate, rather than a "tumble." During the drifting period of his flight, no one axis drift rate ever exceeded about three quarters of a degree per second (at this rate it takes the spacecraft six minutes to make one revolution).

The ground-based flare set off at Woomera was not visible to Schirra through the existing cloud cover, but he did see lightening over Woomera at

(Continued on Page 2)

Welcome Aboard

Manned Spacecraft Center acquired 107 new employees between September 16 and October 4.

Gemini Project Office: William A. Parker, John F. Richichi, Wilson S. Bartels, Vivian D. Pyles, and Edna L. Hamilton.

Apollo Project Office: Lillian A. Enriquez, Roger D. Hicks, Donald W. Conover, James A. Graham, Hugh M. Scott, Jr., James M. Taylor, Carlton E. Sisler, Jr., Ford L. Miller, Clyde A. Whittaker, Julie A. Noble, John B. Saxon, Clinton L. Taylor, William C. Fischer, Clair K. Anderson, Frederick Peters, Edward W. Zeitler, Angelo Frosolone, Rodney K. Caldwell, Jerry W. Craig, Herman M. Biggs, and Celedonia A. Wolfe.

Spacecraft Research Division: Jere C. Wicker.

Life Systems Division: Anna L. Spencer, Richard E. Belleville, Frederic S. Dawn, Thomas W. Frazier, Robert C. Smith, and Danny C. Lazenby.

Preflight Operations: Ruth S. Policicchio, James V. Simmons, Wilbur Allaback, and Eddie Andrew Timmon , Jr.

Flight Crew Operations: Joseph S. Algranti, Dick M. Lucas, Charles E. Sparks, and Edith O. Quinn.

Procurement and Contracts: LeRay H. Kroeker, Andrew J.

(Continued on Page 2)

The Space News Roundup notes with deepest sorrow the passing of Financial Management Chief Rex L. Ray, who died Oct. 5 of congestive failure.

The son of a one-room school teacher in the North Carolina mountains near Murphy, he graduated from the eighth grade at the age of 11 and from high school at 14.

In 41 years of government service beginning as a Treasury Department messenger boy, Ray was successively chief of the contract termination group for the Maritime Commission, chief of field examinations for the meat industry in the Office of Price Administration, meat subsidy auditor with Reconstruction Finance, and director of finance with the Atomic Energy Commission.

He spent 13 years with the AEC, the first 10 as deputy director and the last three as director of finance.

He had been with Manned Spacecraft Center as head of the Financial Management Division since Oct. 8, 1961.

He was dedicated, in his own words, to making MSC's financial management division "the best in the country."

Survivors include his wife, Mrs. Eleanor Ray; three children, Robert, 30, Mary, 18, and Margaret, 11, and his mother.

Space News NASA ROUNDUP!

SECOND FRONT PAGE

Changes In Spacecraft Helpful, Says Astronaut

A number of changes were incorporated into the Sigma 7 spacecraft used by Astronaut Walter M. Schirra during the MA-8 mission, as increased experience with manned space flight dictated.

Greater flelibility in the manner in which the pilot could control the spacecraft attitude; modifications in the communications capabilities in and out of the spacecraft; and an increase in the number of temperature sensing guages were among the changes.

A panel switch permitted Schirra to set controls to give only low thruster operation during fly-by-wire mode, thus conserving fuel.

In press conferences following the flight, Schirra used the term "fly-by-wire low." Explaining, he said, "this only means that we have changed since John's and Scott's flights. We have added a switch to permit us to use the very low thrusters for maneuvering while in orbit. This made it very much easier for me to handle. In Scott's case, he had a little more trouble with the high thrusters cutting in frequently. This way, we could cut them out and I could concentrate completely on control and continue with other tasks simultaneously."

In order to provide the astronaut with communications if he left the spacecraft and entered his life raft after landing, as Scott Carpenter did, Schirra carried a small but high-powered radio transceiver which in tests successfully made contact with an aircraft flying at 9,000 feet about 19 miles away.

A special extension cable was also added to the much higher powered radio transmitter aboard the spacecraft. By throwing the extension cable out through the upper neck of the spacecraft, Schirra could have used the spacecraft radio while sitting in the life raft. The cable idea is aimed at providing communications in the event of emergency or contingency landing many miles from pre-planned landing areas.

Space-age "rabbit ears" have been added to the lower section of the spacecraft. A new high frequency dipole antenna which is coiled to the diameter of two silver dollars but extends 14 feet on each side of the retrorocket package in flight gave "tremendous increase in reception," Schirra said, so much so that on one occasion he had perfect communications with Quito, the Minitrack station in Equador.

"We had much better reception as far as transmission ranges; acquisition times for

(Continued on Page 2)

HOME AGAIN after its world tour—six of them, in fact—Sigma 7 rests on a truck bed outside Hangar 5, its mission over. "It was a good bird," its pilot reported from aboard the USS Kearsarge. "It did everything I wanted it to do."