Gemini VI Rendezvous And Docking Mission Set

The two-day mission of Gemini VI, which will include man's first attempt to rendezvous and dock with an orbiting vehicle in space, is scheduled to be launched from Cape Kennedy, Fla., no earlier than October 25.

Pilots for Gemini VI are astronauts Walter M. Schirra Jr., and Thomas P. Stafford. Backup pilots are Virgil I. Grissom and John W. Young. This will be Schirra’s second space flight. His first was Oct. 3, 1962 aboard Mercury spacecraft Sigma 7.

Prime objective of Gemini VI is to prove out the ability of Gemini to rendezvous and dock with an orbiting Agena vehicle. Secondary objectives of the flight include evaluating maneuverability of the two undocked vehicles.

Two launches are required for the mission. The Gemini-Titan and the Atlas-Agena. Both launch vehicles will be counted down simultaneously to about T-101 minutes for Gemini. At this time the Atlas will be launched to place the Agena into circular orbit of about 185 miles.

When the Agena has obtained proper orbit, Gemini VI will be launched into an orbit of about 100 miles perigee and 168 miles apogee. During the first three revolutions of Gemini VI the astronauts will maneuver their spacecraft into a circular orbit of about 168 miles, approximately 17 miles below the Agena.

On the fourth revolution, as the Gemini spacecraft passes over the Atlantic Ocean, the astronauts will begin terminal rendezvous maneuvers for planned docking with the Agena between Australia and Hawaii.

Only attitude maneuvers and translations maneuvers using Gemini Orbital Attitude And Maneuvering System (GAMS) will be attempted while the two spacecraft are docked. It is planned to dock and separate spacecraft several times to provide experience with docking procedures. Each astronaut will practice docking under day and night conditions.

Following final separation the astronauts will use the spacecraft radar to transmit commands to the Agena to gather additional data on Agena visibility at different altitudes and distances.

About 10 hours of flight time have been planned for rendezvous and docking activities. However, based on experience in previous flights, the Gemini VI flight plan will be flexible to provide whatever time is needed to accomplish these activities.

Scientific and medical experiments for Gemini VI are presently under consideration.

Total flight time for Gemini VI will be about 46 hours and 47 minutes from lift-off to landing. Landing is planned in the Atlantic Ocean about 330 miles south of Bermuda.

Following recovery of the astronauts, ground command will be used to perform various Agena exercises. These are to test Agena command and control, useful lifetime and maneuver capabilities.

Gemini VI marks the halfway point of Project Gemini. Of the remaining six flights, five will be rendezvous missions and one, Gemini VII, will be a long duration flight lasting up to 14 days.

Gemini VIII Flight Crew Named; Mission Includes Rendezvous, EVA

The crews for the eighth Gemini mission scheduled for the second quarter of next year, were named September 20, with the prime crew to be Neil A. Armstrong, command pilot and David R. Scott, pilot, and Charles Conrad Jr. and Richard F. Gordon Jr. as their backups.

Scheduled for at least two days, the mission will include a fairly heavy experiment schedule, in addition to performing several rendezvous. The mission will also include a long duration extra-vehicular activity (EVA) in which Scott will remain outside the spacecraft for probably more than one orbit, through at least a whole day and night cycle.

In the rendezvous exercises, the first one will be similar to the GTA VI planned rendezvous, and then the spacecraft and Agena will be separated, possibly by commanding the Agena from the ground, into other parts of space, unknown to the crew. In the second rendezvous, the spacecraft crew would approach from above the Agena, using an earth-type background, which is considered more difficult than an approach from below using a stellar background.

The EVA exercise will be performed using both a short 25-foot type umbilical similar to the one used by Ed White on Gemini IV, and a 75-foot tether and a support package containing an oxygen supply.

Scott will use the shorter unit.

Gemini VII Spacecraft Completes Altitude Chamber Acceptance Tests

The Gemini VII spacecraft has successfully completed altitude chamber tests, with the prime and backup flight crews having spent about four hours each in the spacecraft in an environment equivalent to 150,000 feet altitude.

Completed September 20 at the McDonnell Aircraft Corp., St. Louis, prime contractor for the Gemini spacecraft, the tests constituted the final acceptance check of the environmental control systems. All crew equipment was checked out at altitude.

The prime crew, Astronauts Frank Borman and James Lovell, wore the lightweight suit which is under consideration for the mission. The backup crew, Edward H. White II and Michael Collins, wore regular Gemini space suits.

Spacecraft cabin pressure was maintained at five psi throughout the test, except for a 45-minute period when the spacecraft was depressurized and the hatch opened by the backup crew to allow an inspection of various items in the cabin in a near vacuum.

MSC's Centrifuge Nearing Completion

(Continued on Page 2)
Radio link for the Manned fixed-fee contract is based on an evaluation of the spacecraft. The contract will be quite similar to White's. Scott will have more fuel and a maneuvering unit similar to the Apollo Service Module. The contractor will operate the Spacecraft Center, as used by White on Gemini IV, package from the Agena. Correct errors in alignment and orientation will be determined and must be met by DeFrance received the 1964 Career Service Award of the National Civil Service League, an award to the top 10 civil service employees in the Government. He received his B.D. Degree in Aeronautical Engineering from the University of Michigan in 1953. The University awarded him the honorary degree of doctor of engineering. The University of California awarded him the degree of doctor of laws in 1952. DeFrance and his wife, Ruth, live in Los Altos, Calif.

Radiation Control For Spacecraft In... 

A support contract for control of radiation sources, in space and on the ground, for manned spacecraft has been signed with Tracerlab, a Division of the Laboratories for Electronics. The $132,000 contract provides for health physics and radiation protection services. Health physics covers the hazard analyses, monitoring, waste disposal, and decontamination of radiation sources used at the Manned Spacecraft Center.


tation in experimental work, checkout, and testing. Radiation protection services include studies performed on spacecraft hardware and experiments with radiation sources. Safety standards and environmental tests will be determined and must be met by each item before it can be flown. The handling and use of radioactive materials at MSC is coordinated by the Radiological Control Committee, chaired by the MSC Radiation Control Office. Tests and procedures for all radiation sources in use on site or in space are set up by this committee.

Tracerlab will also assist in determining whether there could be any interactions between radiation sources on board a spacecraft.

Six sessions are planned with the following subjects: sterilization requirements; control of microbiological contamination; microbiological decontamination and sterilization; sterilizable capsule components and subsystems; and capsule structures, roads, procedures, and facilities. Inquiries concerning attendance at the Conference should be addressed to NASA's Special Assistant for Planetary Quarantine, Lawrence B. Hall, Code SB, National Aeronautics and Space Administration, Washington, D.C. 20546.

Director Of NASA's Ames Center To Retire After 45-Years Service

Dr. Smith J. DeFrance, director of NASA's Ames Research Center, Moffett Field, Calif., will retire Oct. 15, after 45 years of service. It was announced recently by James E. Webb, Administrator.

He will be succeeded by Julian Allen, now assistant director of Ames. DeFrance's leadership at Ames has brought about many additional one-year renewals, of the 17 firms which responded. DeFrance and his wife, Ruth, estimated cost for the three year to the University of Michigan in 1922. In 1953, the University awarded him the honorary degree of doctor of laws in 1952. DeFrance and his wife, Ruth, live in Los Altos, Calif.

Parasail Training- John W. Young, backup pilot for the Gemini VI mission, assumes a top-som position to permit water to drain from inside his suit after a dunking in the water during parasail training exercises. The training exercise was held from Spaul Island on Five-Mile Pass near the Gulf. Also taking part in the training were Virgil I. Grissom, backup command pilot for Gemini VI, and Thomas P. Stafford, pilot for the upcoming Gemini VI mission.

Ling-Temco-Vought To Provide Engineering Support At WSTF

NASA selected Ling-Temco-Vought, Inc., Dallas, September 22, for negotiation of a contract to provide engineering support services at the White Sands Test Facility, White Sands Missile Range, N.M. The facility is under the direction of the NASA Manned Spacecraft Center.

A one-year cost-plus-award-fee contract is to be negotiated. It will contain provisions for two additional one-year renewals. Estimated dollar value of the three-year period is in excess of $5 million. The contractor will operate five engineering laboratories at the facility to support NASA in testing the propulsion systems of the Apollo, command, service and lunar excursion modules. The laboratories are data processing, materials and processes, electrical measurements and standards, and systems design and testing. The work will require approximately 200 persons.

Ling-Temco-Vought was one of the 17 firms which responded to Requests for Proposals issued in June 1965 by the Manned Spacecraft Center.

Apollo Solar Telescope Mount Engineering Study Awarded

A $177,175 study contract has been awarded by NASA to Ball Brothers Research Corp., Boulder, Colo., to define and determine the engineering requirements for a solar telescope mount to be used on proposed Earth-orbiting Apollo applications manned missions.

The six-month, cost-plus-fixed-fee contract is based on an unsolicited proposal by Ball Brothers for an Apollo Telescope Orientation Mount. The concept would provide for the use of a motor to assist in positioning the mount. Final precision pointing would be accomplished automatically.

The system would provide a capability of observing the Sun with relatively large three-year typi- cal-scope telescopes and in having an astronaut available to correct errors in alignment and to make other adjustments.

The mount would be housed in the equipment bay on the side of the Apollo Service Module. A spar to contain instruments oriented toward solar regions of scientific interest would extend outside the Service Module on a two-axis gimbal that could automatically correct for yaw or pitch of the spacecraft. The spacecraft would be oriented so that the extension spar would remain nearly perpendicular to the plane of the Earth's orbit.

Ball Brothers, prime contractor for NASA's Orbiting Solar Observatories, will determine what hardware must be developed for the mount so that modifications are necessary in the Service Module.

The study also will explore the possibility of adapting the mount to stellar and Earth-oriented observations. At orbital altitude, observations directed away from the Earth would be free of most of the atmospheric distortions that hamper ground-based observers.
Long Duration Apollo Flights To Carry 5,000-Pound Experiments Pallet

Long-duration Apollo flights will carry more than 5,000 pounds of scientific experimentation aboard an experiments pallet scheduled to fly for the first time in 1966.

Thirty-six prospective bidders met at the NASA Manned Spacecraft Center September 15 for briefings at a pre-proposal Apollo service module. The would be an experiments pallet which will occupy one of the six pie-shaped segments of the Apollo service module. The other sections contain electrical power, environmental systems, fuel tanks and propulsion to sustain the three-man command module in space.

The pallet consists of a basic structure to support scientific experiments, interconnectors to make use of other Apollo subsystems, plus supplementary subsystems designed to support specific experiments. It is intended to operate for periods of up to two weeks in space, and to be monitored and controlled by the Apollo crew. The service module does not re-enter the atmosphere with the crew, some of the experimentation will be retrieved by extravehicular astronauts—"space walkers"—and returned aboard the command module.

Space in the pallet will be divided and shelved to allow installation of various experimental equipment, with enough flexibility to provide special installations for particular missions. Other sections of the pallet will be devoted to subsystems, such as batteries, which will provide the power for a variety of experiments.

Experiments to be carried in long-duration Apollo flights include some which may require extension "booms" to drive experimental equipment to positions as far from the spacecraft as 25 feet. Others involve removable sections that can be retrieved by an astronaut who would leave the command module during orbital flight. Still others would record data and transmit it to the ground tracking network via VHF and S-Band radio.

A list of experiments to be mounted on the pallet follows:

- Radar scattering cross-section measurements of terrain
- Temperature sounding of the atmosphere from a manned earth orbiting spacecraft
- Ultraviolet mapping of the celestial sphere in the 1230 to 1700 angstrom band
- X-ray astronomy
- Spark chamber for galactic gamma ray
- Nuclear emulsion measurement of atmospheric iodine from orbit
- Zero gravity studies of physical properties: and Frogs otolith functions during zero gravity

Gemini V Crew Cooper, Conrad, And Dr. Berry Presented NASA Exceptional Service Medals

MEDAL FOR COOPER—L. Gordon Cooper, command pilot for the Gemini V flight is presented the NASA Exceptional Service Medal on September 14. Cooper's wife Trudy looks on as the medal is pinned on by the President.

DR. BERRY GETS AWARD—The NASA Exceptional Service Medal award is presented by President Johnson to Dr. Charles A. Berry, astronaut physician, in ceremonies on September 14 at the White House in Washington. Dr. Berry's wife, Dell, looks on as the award is presented by the President.

CONRAD RECEIVES MEDAL—President Johnson pins the NASA Exceptional Service Medal on Gemini V pilot, Charles Conrad, as his wife Jane looks on at ceremonies in Washington on September 14.

ADRESSING THE HOUSE OF REPRESENTATIVES—The Gemini V crew, L. Gordon Cooper and Charles Conrad receive a standing ovation during their visit to the United States House of Representatives on September 14.
Chrysler Space Division Building Saturn-IB Booster

“...We intend to deliver stages to the launch pad as nearly perfect as human ingenuity can devise. We intend to deliver them on schedule, and we intend to perform the job within the estimated costs.”

These are the objectives of Chrysler Corporation Space Division, prime contractor to NASA for S-I and S-IB booster stages in the Saturn project, as outlined by its president, H. D. Lowrey.

Under its Saturn contract, Chrysler is responsible for the design, development, qualification, test, manufacture, assembly, checkout, and static firing of the S-IB stage, and for the launch of the complete Saturn IB vehicle at Cape Kennedy.

Headquarters for Chrysler Space Division are at NASA’s Michoud Assembly Facility, located on an 824-acre site in the eastern section of New Orleans. Current employment exceeds 5,000, with 3,300 at Michoud, 1,600 at Huntsville, Ala., and 600 at Cape Kennedy.

To date, Chrysler has built two of the twelve Saturn S-IB boosters contracted by NASA. Both are scheduled to launch Saturn IB space vehicles carrying Apollo spacecraft on ballistic trajectories from Cape Kennedy. One currently is undergoing launch preparation at the Cape and the other is at Michoud for post-test checkout and flight-fitting after successful static tests at Huntsville.

Prior to the S-IB work, Chrysler constructed first stages for the final two S-I boosters which launched Pegasus meteoroid detection satellites. One of the major tasks assigned to Chrysler by NASA was the redesign and modification of the S-I booster to provide greater payload capability needed for launching Apollo spacecraft into earth orbits.

The S-I booster provided a payload capability of 22,000 pounds, and an upgraded vehicle was needed to permit full testing of the moon voyaging system, including manned rehearsals in earth orbit of the complex maneuvers required for lunar landings.

The design objective was to trim 16,325 pounds from the S-I to develop a 32,500-pound payload capability. Chrysler engineers actually cut the weight by 19,000 pounds, boosting the payload capability to 36,000 pounds.

The redesigned S-I stage, now titled S-IB, linked with the redesigned S-IV second stage from Douglas Aircraft Company, becomes the Saturn IB vehicle, capable of launching the three-module Apollo spacecraft into earth orbit.

Techniques employed in developing the Saturn IB can be applied to further upgrading the vehicle in logical and orderly steps to assure its usefulness as a “workhorse” of the space age, Chrysler engineers believe.

Now in the study stage and under consideration are such projects as additional earth-orbit flight testing, space station deployment and logistics, and lunar and interplanetary flights in three-stage configuration.

Chrysler already has looked at several methods to increase Saturn IB payload and is working closely with Marshall Space Flight Center, Douglas Aircraft, North American Aviation, and others to select the most attractive plans.

The role of Chrysler’s Space Division in the Saturn program is a natural development of fourteen years’ experience in the missile and space field by Chrysler Corporation.

Chrysler received its first contract for the development of the Army’s medium-range Redstone missile in 1952, and company engineers were integrated into all segments of the Redstone Arsenal at Huntsville.

In November 1955, Chrysler delivered its first Redstone missile to the Army. This missile was successfully fired in July 1956. When the U.S. made its first deep penetration into outer space in 1956—an altitude of 682 miles—it was with a Jupiter-C missile.

The following year, Chrysler was named the prime contractor for the Jupiter missile system. In this same period, the first Redstone with a Chrysler-built and

**EDITORS’ NOTE:** This is the third in a series of articles being presented to acquaint the employees of the Manned Spacecraft Center with the contractors who make the Saturn launch vehicles and related equipment that will be used in the Apollo program. The material on these two pages was furnished by Space Division, Chrysler Corporation.

**SHIPLMENT PREPARATIONS—** A plastic protective covering is placed around Chrysler’s S-I-B booster in preparation for shipment to Cape Kennedy in February 1965. The booster launched Pegasus 2 meteoroid detection satellite into orbit.

**MICHOU—** NASA’s Michoud Assembly Facility occupies 824-acre site in eastern New Orleans. Large structure in left center is manufacturing building, where Chrysler Corporation Space Division assembles Saturn S-I-B boosters and the Boeing Company assembles first stages for the Saturn V. To the right is the engineering building, a new addition to the plant.

**WILLIAM S. BLAKESLEE—** vice president, group executive Defense-Space Chrysler Corporation

**H. DOUGLAS LOWREY—** president, Chrysler Space Division
MSC United Fund

Aircraft Operations First To Complete Drive

The first complete report in the Manned Spacecraft Center’s United Fund drive was received September 22 from the Aircraft Operations Office with 100 per cent participation and 148 per cent of their goal. Team captain for this group is Jane Braun and the 23 people in her unit pledged a total of $664.

Phil Hamburger, chairman of the MSC UF drive, urged all team captains to concentrate on contacting each individual at the Center and to make certain that all pledge cards are filled out and returned.

Hamburger said the drive seems to be progressing at a satisfactory rate. We want to make this year’s United Fund drive an even greater success than last year’s, Hamburger stated.

UF vice chairman assisting Hamburger with the drive here at the Center are Stan Weiss and Raoul Lopez.

This year’s United Fund drive is $60,000.

Radio Control Model Airplanes

To Meet Oct. 6

The Radio Control Model Airplane Club for MSC and MSC-United States Military Academy members will hold its monthly meeting at 5 p.m., October 6 in Room 651 of Building 1.

This second official meeting of the group will feature a technical discussion on the “rigid-wing” proportional system which is currently being featured in a well known radio control publication.

Anyone who is or has been interested in any phase of radio control building and flying is urged to attend the meeting. For additional information, call Bill McCarty, Ext. 5411; Bill Malley, Ext. 2297; or Tim Brown, Ext. 4374.

According to Tim Brown, considerable flying activity from the “MSC airport” has been taking place during the past month.

Women’s Basketball

League Spots Still Open

Team and individual spots in the basketball league for women here at the Center are still open and the original deadline for entering has been extended until October 15.

Interested parties are asked to call Dave Mullins, MSC sports coordinator, at Ext. 4521. Games will be held in the Ellington AFB gym.

EVERY GOOD GUY

GIVES THE UNITED WAY
President Proclaims October 3-9 'Employe The Handicapped Week'

The week of October 3-9 has been proclaimed by President Johnson as "National Employ the Handicapped Week." Although the program for employment of the handicapped is a continuing one on a year around basis, it is appropriate at this time to take special note of the benefits derived from utilizing handicapped persons.

According to Carl Maxey, MSC Personnel Division, coordinator for the Employment of the Handicapped, there are over 100 employees at the Manned Spacecraft Center with major physical handicaps. These persons perform well a variety of assignments throughout the Center, both in technical and administrative fields.

The employment records of handicapped workers show why it is good business to hire them. Maxey said. When properly placed, they have better safety records, better production records, and better stick-to-the-job records than the able-bodied. It seems clear then that our participation in this program benefits MSC as well as our handicapped citizens.

Federal Accountants Association Invites MSC Employees To Meeting

Dr. J. E. McNeill, head of the Accounting Department at the University of Houston addressed the Houston chapter.

Aero Club Oct. 12 Meeting To Feature Film

The Aero Club here at the Center plans to show the film "Wings To Baja" and to issue a new list of aircraft available in this area to those attending the October 12 meeting.

Meeting time will be at 5 p.m., in the auditorium of Building 6 in the Nassau Bay office building complex across from the Center. All interested in flying are invited to attend.

Don Bray, the club's information officer has requested Aero Club members to supply him with information and announcements that may be of interest to other club members. His extension is 3754.

MSC BOWLING ROUNDPUP

MSC COUPLES LEAGUE

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High Game Women: Lois Tison 200, Verra Lantz 199.

High Game Men: Frank Morgan 225, Ron Durkee 222.

High Series Women: Shirley Yeater 529, Carole Boudreau 510.

High Series Men: Frank Morgan 607, Ron Durkee 593.
producers of Apollo

produced tactical warhead was successfully fired.

Chrysler followed these achievements with missiles which sent two American satellites into orbit in 1958. Later that year, the first high altitude tests of a nuclear detonation were delivered by a Chrysler Redstone. And by the end of 1958, a Juno II space vehicle—a modified Jupiter—penetrated 65,000 miles into space.

Between 1959 and America's first manned space flight in 1961, Chrysler helped the U.S. accelerate its missile and space program. America's first successful space flight carried two monkeys to an altitude of 350 miles and 1,700 miles down range at the top of a Jupiter missile.

The first Project Mercury spacecraft, an unmanned vehicle, made a 230-mile sub-orbital flight with the aid of a Chrysler-produced Redstone booster.

Chrysler also built the launch vehicles which sent the first two Mercury astronauts on sub-orbital flights in 1961. The Chrysler-built Redstone achieved a reliability record of 95 per cent successful flight and all Chrysler-built Jupiters have been successful. This reliability record was continued in the two Saturn vehicles Chrysler launched. Both left the pad on successful flights at 00:00 of the programmed countdown.

SATURN-I BOOSTERS—This interior view of Michoud Assembly Facility shows portion of area assigned to Chrysler Space Division. In various stages of assembly are the two Saturn S-1 boosters constructed by Chrysler. The other eight S-1s, prototype of the lighter, more powerful S-1B, were built at Marshall Space Flight Center, Huntsville, Ala. The S-1 series come to an end with launching of Pegasus 3 meteoroid detection satellite on July 30 by SA-10, shown here at left in initial assembly.

S-1B BOOSTER ASSEMBLY—Under assembly here is the first of 12 Saturn S-1B boosters to be built by Chrysler Corporation Space Division at the Michoud Assembly Facility. A 70-inch diameter fuel tank, one of eight to be clustered around the center 105-inch diameter tank, is put into position.

SATURN LAUNCH—The first industry-produced Saturn I booster, built by Chrysler Space Division at Michoud Assembly Facility in New Orleans, launches a 5200-pound Pegasus meteoroid detection satellite into orbit from Cape Kennedy on May 25, 1965. This was the ninth of 10 Saturn I flights, all of which were 100 per cent successful.

STATIC TEST—The first Saturn S-1B booster, built by Chrysler Space Division at Michoud Assembly Facility in New Orleans, is successfully static test fired at Marshall Space Flight Center in Huntsville, Ala.
Welcome Aboard

During the last reporting period, 55 new employees joined the Manned Spacecraft Center. Center Medical Office; Paul R. Foot and William B. McCollum.

Administrative Services Division had said that while the Mercury-Redstone 3 (MR-3) flight activities were adhered to as closely as possible—actual spacecraft couches were used, a production hand-controller assembly was installed, the latest model pressure suits were worn, and the environmental control system was equipped with a fresh coolant. Failures in spacecraft-sequencing were introduced which required the astronaut to initiate an appropriate manual override.

OCT. 7, 1960 — Federation Aeronautique Internationale meeting in Barcelona, Spain, accepted the first rules to govern establishment of official records for manned spacecraft. The first record to be recognized must be at least 100 km, and later records must exceed existing record by 10 percent. Four categories for records are duration of flight, altitude without orbiting earth, altitude in orbit, and mass lifted above 100 km.

OCT. 12, 1960 — Dr. T. Keith Glennan, NASA administrator, announced that communications satellites developed by private companies on a commercial basis would be launched by NASA at cost to assist private industry in developing a communications network.

OCT. 13-14, 1960 — DES-FLOTFOUR personnel, designated previously by the Department of Defense to provide recovery support for Project Mercury, conducted a communications exercise in the recovery room of the Mercury Control Center at Cape Canaveral, Fla. This was the first time these communication facilities had been used since the installation of the equipment.

OCT. 15, 1960 — A USAF Atlas launched at the Atlantic Missile Range placed a nose cone containing three black mice, 650 miles up and 5,000 miles downrange at 17,000 mph. The nose cone was recovered in the target area near Ascension Island, the three mice surviving the flight in good condition.

(EDITORS NOTE: To acquaint MSC employees with the rich historical background of their area, and of Texas in general, a series of historical articles prepared by the Historical and Library Services Branch will appear in the Roundup.)

William Sydney Porter, familiar to millions as O. Henry, one of the most widely read, best loved and most romantic literary figures ever to appear in America, was a Houston newspaper executive. The HOUSTON POST paid him $20 a week to write a lively feature called "Tales of the Town." Dapper and mustached, he lived in a shabbily flat on Caroline Street with his pretty wife Athol and their daughter Margaret.

Porter's life probably was a greater story than any he ever wrote, and yet he finally became the most highly paid short story writer in Texas. His life was as tragic as Poe's, his wit as keen as Mark Twain's, his prose as rollicking as Kipling's verse. Critics hailed him as the American Maupassant.

On St Valentine's Day, 1896, Porter, pale and sick, taken to Austin, where he had worked as a bank teller before coming to Houston, and charged with embezzling $4700 from the First National Bank. He bitterly de- nied the charge. Austin friends posted his bond, and he returned to Houston to find Athol prostrate with shock and his career destroyed.

His wife and daughter returned to Austin to live with Athol's parents, and his once-popular newspaper column appeared irregularly. The last one was published on June 22, 1896.

Summoned to trial in July, Porter was arrested by the sheriff, read the charge, and gave his plea of "Not Guilty." After a trial in which he was given the option of admitting his guilt and paying a fine, he fled to New Orleans and took passage on an empty banana ship to Honduras, where he was safe from extradition.

To his tropical sanctuary in December came a box containing cakes, candies and his overcoat! An accompanying letter from his mother-in-law said: "Come home and clear your name before it's too late. Athol puckered your Christmas box running a fever of 105!"

On St. Valentine's Day, 1896, was a registered pharmacist in Columbus, Ohio. The story of his life is at Pearl Harbor.

Such a case today would be impossible. O. Henry became as famous as Teddy Roosevelt and rich enough to send Margaret to Belmont College and to live, himself, in a luxurious Irving Place apartment.

Perhaps Will Porter, ex-Houston newspaperman, was not quite as famous as Poe was— or Mark Twain or Kipling. But O. Henry gave the American magazine magazines and other publications. With time off for good behavior, he was released on July 24, 1901, having served three years, and three months of a five-year sentence.

Soon he was reunited with his daughter, who was living with Athol's parents in Pittsburgh. Then 12 years old, Margaret did not know that her father had been in prison. For in his letters she had been told that her father was working in a drugstore.

Will and Margaret moved to New York, and the big city gave to the young writer a life of that Houston and Austin had denied them. In 1904 the ex-convict began to write for magazine editors begged him for more. O. Henry became as famous as Teddy Roosevelt and rich enough to send Margaret to Belmont College and to live, himself, in a luxurious Irving Place apartment.

Will Porter was arrested in Februa- ry of 1898, entering a plea of innocent, but refusing to testify. He had inherited a badly kept set of books in a carelessly managed paper mill, and he was continuously allowed and offi- cers took money from their personal accounts without bothering to write checks.

One biographer wrote: The government's case against Porter was as unprincipled as the bank's slovenly operations. Such a case today would be shown out of court.

But Porter was convicted. On April 21, 1898 — San Jacinto Day — the United States declared war against Spain. The next day Will Porter was taken to the federal peniten- tial farm in Alaska.

A man of many talents, Porter was a registered pharmacist. In prison dispensary he wrote some of his finest stories, sign- ing them "O. Henry," and selling them to popular and literary magazines and other publications. With time off for good behavior, he was released on July 24, 1901, having served three years, and three months of a five-year sentence.

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Dunking In Oil Provides Data On Zero Gravity Exposure

A 10-day dunking in tubs of cosmetic oil has done little for the manly beauty of 12 college students but has provided a lot of data for space scientists.

The students’ 10-day bed rest were also prescribed for each of the students as part of a three-month study conducted by the NASA Manned Spacecraft Center by the Douglas Missile & Space Systems Division in Santa Monica, Calif.

Douglas MSSD scientists are now evaluating the data to determine whether the silicone oil "baths" are superior to bed rest as a method of simulating the effects of prolonged weightlessness.

Unified S-Band Communication System Contract Awarded

A contract has been awarded by the Manned Spacecraft Center for the development, fabrication, and feasibility demonstration of a spacecraft Unified S-Band (USB) rendezvous and communications system.

Tens of days in bed rest were also prescribed for each of the students as part of a three-month study conducted by the NASA Manned Spacecraft Center by the Douglas Missile & Space Systems Division in Santa Monica, Calif.

Douglas MSSD scientists are now evaluating the data to determine whether the silicone oil "baths" are superior to bed rest as a method of simulating the effects of prolonged weightlessness.

Fluid immersion and the more conventional bed rest technique are the two principal experimental environments on earth which can provide data on the effects of prolonged exposure to zero gravity, such as in a space station.

After both the 10-day immersion in oil and the 10 days of bed rest, the students were checked for vascular and other symptoms of physiological deconditioning, similar to those observed during post-flight examinations of American and Russian astronauts.

The 12 students, all from colleges in Southern California, were dubbed "centrinauts" during a space research experiment last year when they were whirled on a centrifuge at Douglas MSSD to evaluate the therapeutic merits of using an artificial gravity device in a space station.

In the centrinauts' new experiment, a centrifuge was used following each subject's oil or bed rest period. He was placed in the centrifuge and his tolerance tested to rotations creating up to eight times the force of gravity.

Format for the experiment was for three of the centrinauts to spend 10 days in oil up to their chins while three others were in bed for an identical period. Simultaneously two other groups of three each were put through a conditioning regimen in preparation for oil and bedrest sessions.

After completing a 10-day oil bath or bed rest session, each trio was off duty for six weeks, the time felt to be essential for reconditioning. Then the groups returned and switched assignments—the oil bath centrinauts spending 10 days in bed and the bed rest subjects spending 10 days in oil.

The conditioning phase before the oil baths or the bed rest included workouts on the bicycle ergometer and the treadmill. These exercises established a high level of metabolic activity so that deconditioning could be better observed during the 10-day periods of inactivity.

Various functional and diagnostic tests were conducted prior to, during and after the 10-day sessions.

The oil, a fine grade of silicone used widely in cosmetic preparation, was chosen as the immediate medium because it precludes problems of skin maceration and infection observed during prolonged water immersion.

In the tubs, a processing unit filtered and deodorized the circulating silicone, which was heated to near body temperature.

The oil is inert, stable, bacteriostatic and filterable.

During the experiment, the centrinauts remained constantly in a horizontal position, although not necessarily on their backs, so that the long axis of the cardiovascular system was maintained horizontally.

Three nurses were continuously on duty, monitoring the students and providing routine "bed fast" nursing care.

The daily menu consisted of a 2,100-calorie diet, served, of course, to the subjects in bed and in the tubs.

The 10 days in oil or bed rest were brightened somewhat by television and radios at the disposal of the centrinauts. Some of the men read. Others played chess. One centrinaut did homework on a pilot training course.

A diversionary highlight was arranged by study director Dr. W. J. White of Douglas' Advance Biotechnology Department. He invited members of Hollywood's Theater 40 professional classical workshop to present Shakespeare's "The Winter's Tale" to the students.

The cast happily obliged, donating time and talent and appearing in what members agreed was their most unusual command performance. A stage was erected in front of the oil bath subjects, whose tubs could not be moved. They were in the "box seats." The three bed-rest centrinauts were wheeled up behind.

The few others fortunate enough to be admitted to this exclusive engagement—the nurses, the doctors and a handful of biotechnology attendants—got the "cheap seats" behind the centrifuge pit or settled for standing room only.

The centrinauts, who received approximately $75 daily, plus board and room, originally were recruited from the University of California at Los Angeles on a voluntary paid basis—if they could meet the rigid physical and mental requirements.

Now they come from several Southern California colleges and universities. Some of the original centrinauts still work with the group.
**SECOND FRONT PAGE**

**Mariner IV Still Functioning Long After Mission Ends**

The Mariner IV spacecraft, having achieved its mission objectives and now in its 307th day of flight, will receive a command from Earth today, concluding—possibly only temporarily—the National Aeronautics and Space Administration's longest and most complex deep space mission. Since launch Nov. 28, 1964, Mariner IV has transmitted to Earth nearly 50 million engineering and scientific measurements on the environment of interplanetary space and in the vicinity of Mars.

About past Mars last July 14 at an altitude of 6118 miles, recording the first close-up pictures of the planet's surface. After today's ground command switches the spacecraft's transmitter from the high-gain directional antenna to the omni-directional antenna, telemetry will be received from this period, but periodic tracking of the spacecraft as it orbits the Sun will determine whether or not its transmitter is still operating.

Tracking data during the long cruise will help in the evaluation of the new giant antenna system and hopefully will allow trajectory analysts to increase the accuracy of the known relative positions of Earth and Mars. By mid-1967, Mariner IV and the Earth will be close enough to attempt to resume communications using the low-gain antenna. Closest approach to Earth will be on Sept. 7, 1967 at a distance of 29 million miles.

Next week, October 3-9, is Fire Prevention Week and Center employees will be made aware of the need to form good fire prevention habits and possibly save themselves and their families from the tragic consequences of fire.

During the week, employees will be reminded by posters, window displays, a static display in the cafeteria, and a "Fire Prevention" publication that is to be distributed to all employees. This material will be coordinated by the Manned Spacecraft Center's Safety Office.

An open house will be held this week in the MSC Fire Station (Bldg. 25) on Second Street near the Central Heating and Cooling Plant. All MSC and on-site contractor people are invited to come by to inspect the fire fighting equipment at the station.

The major pieces of fire-fighting equipment on display by the fire department will include two pumper units, a utility vehicle with rescue equipment, portable generator and floodlight. The department now has on order another pumper unit, a special hazards vehicle and a 100-foot ladder truck.

Observance of Fire Prevention Week is governed by the week that contains October 9, which was the date of the Great Chicago Fire of 1871.

Through the fire prevention efforts of employees and the fire department, no fire losses have been sustained to date in the two years the Center has been in operation, according to Kenneth E. Gentry, head of the fire department's prevention section.

One of the major sources of fires attributed to carelessness here at the Center, Gentry said, is from dumping ashtrays with burning material in them, into trash cans with combustible material. So far all these small fires have been extinguished readily enough to prevent any loss of property.

Gentry also stated than an unusual amount of flammable type liquids are used in many areas of the Center and using caution in handling these materials cannot be overemphasized.

Three types of fire extinguishers are located in strategic areas throughout the Center buildings. Each is pointed out by MSC fire officials. They are: water, CO2, and dry chemical. All operate the same way and employees are urged to become familiar with the types of extinguishers in their working area. Fire officials urged all to exercise caution in using a fire extinguisher—never use water on an electrical fire, use CO2. The dry chemical is best for flammable liquids.

Fire prevention lectures and fire extinguisher demonstrations are available to all on-site organizations upon request. Arrangements may be made through the Safety Office, Ext. 7711, or by calling Ext. 4658 at the Fire Station.

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**NASA Negotiating Contract For Use Of Aircraft For Over-Sized Cargo**

NASA announced last month the selection of Aero Spacelines, Inc., Van Nuys, Calif., for negotiation of a contract to provide air transportation service for large government cargoes. This contract will provide one year's service estimated at $1.5 million. The contract will provide three one-year renewal options.

Aero Spacelines will operate the only aircraft in existence which can fulfill the size and weight requirements for such out-sized cargoes as the S-IVB stage of the Saturn booster, the Saturn IB and Saturn V instrument units, and the Lunar Excursion Module Adapter. The aircraft is called a "Super Guppy."