SPACEPORT NEWS

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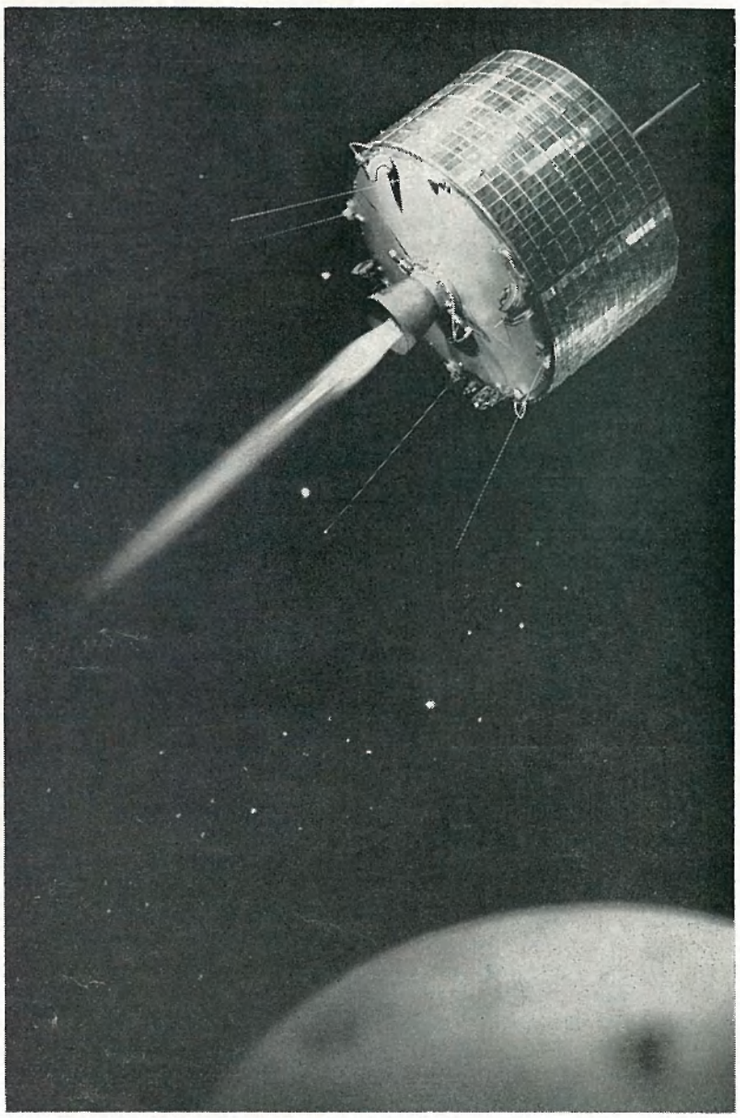


SIMULATED SYNCOM orbital flight was achieved through this creative triple exposure by RCA photographer Bob Special. To learn how he "launched" it ahead of schedule, turn to Page 4.

May Date For MA-9

Astronaut Gordon Cooper's MA-9 orbital flight has been postponed due to wiring troubles in the Atlas booster.

The mission is now scheduled for mid-May.

NASA officials said General Dynamics Astronautics, manufacturers of the Atlas, will use a new wiring technique as part of a constant effort to increase reliability and safety of manned-rated Mercury boosters.

Mating Time

St. Valentine's Day celebrates the festival of a martyr beheaded at Rome under Emperor Claudius.

Association of the holiday with lovers actually has no connection with the Saint, and probably had its origin in an old belief that on this day birds begin to choose their mates. (Source: World Almanac).

AT PRESS TIME

SYNCOM AIMED HIGH TO "HANG" IN SPACE

A 150-pound synchronous communications satellite, Syncom, sat snugly atop its 56-ton Delta booster early this morning, aimed at an orbit 22,300 miles above earth.

Plans call for the hatbox-shaped, active-repeater spacecraft to fly "figure eight" patterns back and forth across the equator, where it will appear to virtually "hang" in one spot.

If the flight is successful, communications tests on the new space traveler will begin within a few days between a transportable ground station at Lakehurst, New Jersey, and a station aboard the USNS Kingsport at anchor in Lagos Harbor, Nigeria.

Although Syncom isn't designed to provide television channels, as did Relay and Telstar, it is to transmit two-way telephone calls and teletype messages.

It is also scheduled to probe a major problem—what happens when signals are sent out to such a great distance and return.

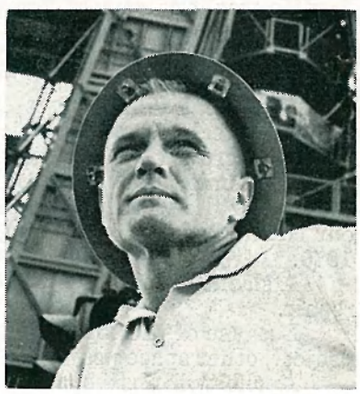
First Of Three

If the spacecraft proves its feasibility, three communications satellites will eventually be launched in synchronous orbits at evenly-spaced points above the equator to provide continuous worldwide coverage.

It is hoped Syncom will usher in a new approach to spacecraft attitude and velocity control.

It is to mark the first relay of microwave signals from one point on earth to another via a satellite so high in orbit, and it will be the first space communications link to Africa.

In its final location in space, Syncom will not be in a truly stationary orbit. This would require that the orbit be circular and in perfect alignment with the plane of the equator as well as having a period of 24 hours. Syncom is designed only to meet the 24-hour requirement.



John Glenn

GLENN REFLECTS ON 'WHIRLWIND' YEAR

One year ago Wednesday a 40-year-old Marine pilot captured the world's admiration and imagination by orbiting earth three times in his Friendship Seven spacecraft and returning safely.

For Astronaut John Glenn, the historic flight was just a prelude to a year of whirlwind activities.

Reflecting on these events in an exclusive statement for SPACEPORT NEWS, Glenn said, "We have learned a lot about space flight in the past year, and I am naturally proud to have been a part of it .

"All of these events, however, are best used not as separate accomplishments of the Mercury team, but to provide a means for revealing the direction we should follow in the future.

"One of the most gratifying

(See JOHN GLENN, Page 2)

SPOTLIGHT

A TEAM MAN

For a year now astronaut John Glenn has received the accolades of an admiring world for his triple orbit of earth last February 20.

No pilot in history — Lindbergh and Rickenbacker included — has been so acclaimed.

He was applauded by the President, lauded by Congress and nearly smothered in ticker tape thrown by more than four million New Yorkers.

He has traveled almost as far on earth as he did in orbit, making speeches, accepting awards and appearing at public functions.

And yet, through it all, Glenn has never lost sight of the fact that he didn't fly alone; that he was up there only because of the efforts of thousands of skilled and dedicated workers who planned his course, built his craft, fashioned his protective suit, and, in general, made innumerable tiny individual contributions that added up to mission success.

He was, and still is, foremost, a team man.

THE BURDEN OF PROOF

The fiscal 1964 budget calls for a $7.3 billion allotment for space technology, of which NASA would receive $5.7 billion if approved by Congress.

In submitting the budget for approval, President Kennedy recognized the vital need for Apollo funds if we are to realize our committed goal of placing astronauts on the moon before 1970.

A slashed lunar budget would have crippled Apollo beyond repair.

Because of the top priority emphasis on the lunar landing project, other space program efforts will be reduced somewhat.

Apollo will absorb about four per cent of the total federal budget. As Dr. Hugh Dryden, NASA's Deputy Administrator, has said, it will eventually cost every American about $100 to get man to the moon and back.

The next step is congressional approval, and although there may be some rough sledding, it is anticipated a figure close to what has been asked for will be passed.

When that happens the burden of proof will be upon us. With the task assigned and the money in hand, we must uphold our part by attaining the goal.

It's a difficult and complex challenge that will require 100 per cent plus effort from each of us during the years ahead.

ROHR CORPORATION TO BUILD ANTENNA

NASA has announced selection of the Rohr Corporation of Chula Vista, California to design, manufacture, install and test a $12 million advanced antenna system to be located at Goldstone, California.

With a diameter of 210 feet it will be one of the largest precision antenna in the world. The California Institute of Technology's Jet Propulsion Laboratory will manage the system.

The completion of the antenna system, expected in three years, will represent a significant improvement of the Deep Space Network.

SPACEPORT NEWS

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BALLOON LAUNGHING SET FOR MARS SCAN

NASA, the National Science Foundation and the Office of Naval Research are jointly backing a project, Stratoscope H, which may this month give man his clearest view yet of Mars.

But the instrumented sighting will be made from a balloon rather than a rocket.

Preparations are nearing completion for a test flight of a 500-foot plastic balloon that will carry instruments to the edge of the earth's atmosphere.

Instruments will scan Mars' surface from above most of the earth's dust and vapor, and infrared measuring equipment will search for water vapor on the planet.

In a later flight, possibly during October or November, a second balloon will carry a 36-power, remote-controlled telescope for a visual look at Mars.

Each balloon should reach an altitude of 80,000 feet, where it would travel about 300 miles during a night-time flight. Winds at that altitude would carry it eastward in winter and westward in summer.

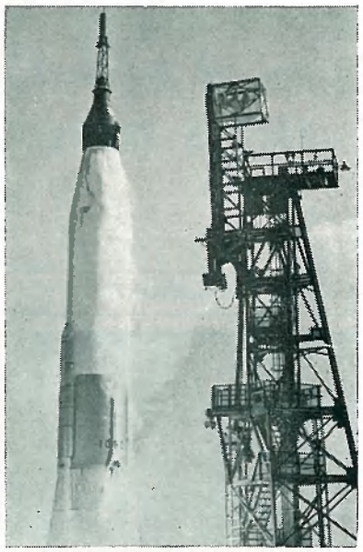
Apollo Subcontracts Being Negotiated

North American Aviation's Rocketdyne Division, Bell Aerosystems Co., the Marquardt Corp., and United Aircraft's Hamilton Standard division have been selected by NASA for pre-negotiation discussions on subcontracts for work on the Apollo spacecraft.

Discussions with Rocketdyne are for an engine that would take the lunar excursion module from the lunar orbit to the moon's surface.

Negotiations with Bell are for an engine that would take the module from the moon back to the Apollo.

A reaction control system that would stabilize the module in its flight is the subject of discussions with Marquardt, and Hamilton is negotiating for an environmental control system that would provide oxygen and other necessities for the astronauts inside the modules.



JOHN GLENN

(Continued from Page 1)

things of the entire space program, has been the effort and dedication put forth by so many individuals to accomplish the successful missions that have been flown in a comparatively short period of time.

"The midnight oil has been burned by so many people so many times to get us where we are today, that normal workdays and family lives have long since ceased to be a reality.

"But along with all this hard work and dedicated effort," come periods of exhilaration that occur only as individuals have realized that they have made a significant contribution to science and the progress of our country.

"I hope we can all experience many more such moments together in the future."

Saturns Change Name

NASA, in the interest of simplification, has announced slight changes in the names of Saturn launch vehicles.

Saturn C-1, whose fourth flight vehicle is now undergoing pre-launch tests at complex 34, is now officially known as Saturn IB, and C-5,

Saturn C-IB, which will have greater thrust than the original model, will now be Known as Saturn IB, and C-5, the advanced version that is to send Americans to the moon, becomes Saturn V.

The Milky Way galaxy, of which the earth's sun is a minute member, contains nearly 100 billion stars.

Morey Brimer Calls Launch 'Routine Job'

Test Conductor for the Syncom flight is a mild-mannered, 40-year-old veteran of 79 Cape launches.

In something of an understatement, bespectacled Morey Brimer of the Douglas Aircraft Company says nonchalantly, "Our assignments are routine."

Despite the apparent ease with which the Douglas-Delta team, under the direction of Goddard Space Flight Center's Field Projects Branch, has clicked off successful launches, the assignments have been exacting, varied and challenging.

Brimer has conducted 13 of the flights.

But the dramatic picture of a test conductor ordering commands and pushing console buttons during the countdown's frantic final minutes, as depicted by TV cameras during Mercury launches, doesn't begin to tell the whole story.

Minute Details

Brimer's work on Syncom, for instance, began several days before the scheduled launch with an all-systems test countdown.

The Delta vehicle ran through electrically simulated pitch and yaw maneuvers and stage operation under flight conditions inside its gantry.

Brimer, who authored the Delta countdown manual, checked every minute detail during the last few pre-launch days.

He was responsible for coordinating the work of spacecraft engineers and booster technicians, so their mated creation would function perfectly in space.

During the final minutes of the count, the burden of split-second decision — go or no go — rests squarely and solely on Brimer's shoulders.

But to him it's just another "routine assignment."

Book Proves Popular

Most popular book in LOC's Technical Library these days is "Peenemunde to Canaveral," an account by Dieter K. Huzel of the German rocket team that came to America following World War II.

Morey Brimer

LANGLEY SOIENTISTS ASK DESIGN BIDS FOR LIFE SYSTEM

NASA's Langley Research Center has requested proposals from a number of industrial firms for design and construction of a prototype six month life support system for four men.

After careful evaluation, the proposals received from industry are planned to lead to a contract for designing, building, testing, and delivering a complete long-term life support system to be used for further research and experimentation.

Langley officials pointed out that the life support system successfully used in Project Mercury is designed for 24 to 30 hours of service, and simple extension for much greater duration would require excessively heavy equipment.

Before extended space missions with multiple crews are attempted, the present scope of technology must be enlarged, and the research called for in the new life support program will contribute to that end.

Major emphasis will be placed on maximum reliability, imperative in a manned space mission, and on minimum weight, volume, and power requirements.

New Mission Control Center For MSC To Open In 1964

NASA will negotiate with the Philco Corporation for a contract to develop and equip a $50 million Manned Flight Mission Control Center at the Manned Spacecraft Center in Houston.

Gemini rendezvous and Apollo flights will be directed by the new Mission Control Center just as Project Mercury flights have been run by the Mercury Control Center at Canaveral.

Until the new center goes into operation in mid-1964, early Gemini flights will be conducted from Mercury Control.

However, the Mercury Center is not designed to handle the later, more complex Gemini missions involving rendezvous nor any of the Apollo missions.

Focal Point

The Mission Control Center will be the complex focal point for the entire ground operational support system.

From it, the manned spacecraft themselves and the network of world-wide tracking stations will be directed.

The Center will consist of several major electronic subsystems — communications, displays, simulation and computers.

The new control center, containing two mission control rooms, will be housed in a 200-foot square, three-story building.

A computer complex and communications center will be on the first floor. Identical mission control rooms will be on the second and third floors.

Fewer than 20 controllers will be in the mission control room during a flight, but upward of 250 technical and administrative people will be involved in carrying on supporting functions in adjacent rooms.

'Mock Flight' Contract Let

NASA's Flight Research Center at Edwards, California, has awarded a $128,675 contract to Comcor Inc. of Denver, for service and maintenance of the flight simulators that are used to provide ground simulation for the X-15 aircraft.

This computer system has the capability to provide the actual aircraft performance and stability conditions that may be expected in flight.

Such vital information as speed, altitude and the energy that may be expected under certain flight conditions can be simulated prior to flight with the system.

Many hours of pilot preparation are spent in an exact replica of the cockpit of the rocket powered aircraft prior to flight, which in combination with the analog computer system, allows the pilot to experience almost an exact duplication of the proposed flight.

To date, the three X-15 aircraft have made 77 flights in a joint NASA-USAF-USN program. Research flights have been made as high as 314,750 feet and at a speed of 4104 m.p.h.

Electric Alarm

Astronaut Gordon Cooper may nap during the flight of MA-9 but he won't get a chance to oversleep.

A tone signal transmitted thousands of miles from earth to the orbiting spacecraft will serve as an electric alarm clock to awaken him.

Plans now tentatively call for two four-hour naps during the flight. Thus Cooper will travel around the world nearly three times during each snooze.

Spacecraft For 30 Men Now in Planning Stage

A space station that could carry thirty men and stay in orbit five years is being planned by NASA's Spacecraft Center in Houston.

The space station will look something like a huge doughnut with three spokes joined to an inside hub where spacecraft would dock.

These spacecraft would carry scientists to the earth and back when crews were changed.

Cape Launch Of Meteoroid Satellite Set

NASA will negotiate with Fairchild Stratos Corp. of Hagerstown, Md., on a contract to build a giant meteoroid detection satellite, for launch late next year.

The two-ton satellite will be launched on the eighth and ninth test vehicle flights of the Saturn I rocket as part of the expanding meteoroid detection study directed by NASA's Office of Advanced Research and Technology. Marshall Space Flight Center will have project management responsibility.

Flat Wings

During launch from Cape Canaveral, the satellite will be housed in the 10-foot diameter- boilerplate Apollo service module which the Saturn I will carry on top of its S-IV second stage.

In orbit, the meteoroid satellite will remain attached to the S-IV and will deploy two large flat wings — each 10 feet wide with a total span of 96 feet — by a system of scissor-like links driven by an electric motor.

When deployed, the satellite will expose an area of more than 2,000 square feet, contrasted with Explorer XVI, launched from Wallops Station on December 16, which exposes an area of 25 square feet.

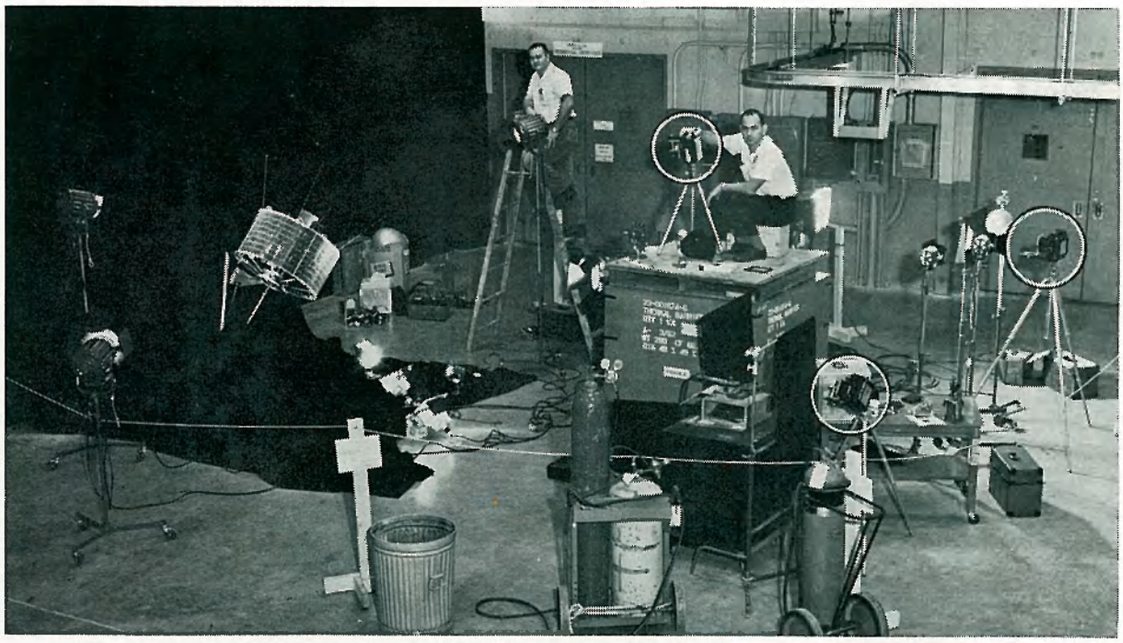
Scientists and engineers need more information about the hazard of penetration by meteoroids in space flight for the design of manned spacecraft, fuel tanks and radiators which will be exposed in space for long periods.

No More Cold Feet

A refinement in astronaut Gordon Cooper's wardrobe will preclude the possibility of his getting "cold feet" in space.

Project Mercury officials have announced Cooper's boots will be an integral part of his spacesuit this time.

On all previous flights the boots were separate items and put on over the spacesuit.



COUNTING DOWN for their simulated launch of Syncom, via a complex triple exposure, are RCA photographer Bob Special, right, and lighting specialist Ron Carman. Special holds number one camera, trained on the mounted spacecraft. Camera number two, lower right, is set to picture the flame from an acetylene torch. The third camera, upper right, is focused on a cardboard "sky" and volleyball "earth."

Chicken Wire, Volleyball, Flaming Torch Used To Help "Boost" Syncom Into Orbit

NASA scientists who prepared the Syncom satellite for flight would probably have apoplexy if they knew it took a double strand of copper chicken wire, a punctured piece of cardboard, a 15 by 30 foot cut of black velvet, 11 floodlights, three cameras, an acetylene torch and a battered volleyball to get their spacecraft into "proper orbit."

This paraphernalia was used by imaginative photographer Bob Special to simulate Syncom in flight, and from his results, on page 1, few would doubt this wasn't an actual photo of the craft in outer space.

Unusual Photos

Special, an RCA photographer assigned to NASA to create "unusual" pre-launch photos of spacecraft, achieved his Syncom masterpiece via a complex triple exposure, using three speed graphic cameras.

After checking with payload specialists to assure his setup was as close to actual flight characteristics as possible, Special focused his number one camera on the satellite itself, with an exposure of one second at F/8.

Lighting specialist Ron Carman placed a 2,000-watt orange-yellow light above the mounted Syncom, to simulate the sun.

A 750-watt blue light was placed to the opposite side and below the hatbox-shaped craft, representing the reflected light of earth.

Dulling Spray

On the floor below Syncom, 500-watt red, orange, yellow and blue lights trained on its outer surface to put color into the solar cells, while a dulling spray was applied to the heat resistant shield to kill glossy reflections.

The second camera was set up two feet from a piece of black cardboard, punctured by little pinholes. Over the camera's lens were two patches of copper chicken wire. Special explained this creates "stars" on the dark background.

Somehow though, it didn't seem complete. Special watched airmen in the hangar playing volleyball during their lunch hour. He borrowed the ball and taped it to his "star board," to appear as earth. This exposure was half a second at F/4.7.

The final camera, set at 1/200th of a second at F/4.7, zeroed in on the flame of a blow torch, to simulate the exhaust from Syncom's apogee motor.

Special delicately traced the number one camera's image of Syncom onto the number three camera's viewfinder, so the separate exposures would match when put together.

The flame, however, wasn't long enough and was difficult to manage. Finally, the blow torch was discarded in favor of an acetylene torch.

Same Film

The triple exposure was achieved by shooting the same piece of film three times, once in each camera.

To get the final results, Special took 36 Polaroids and 108 regular black and white and color exposures during the two-day operation, which was supervised by NASA photo coordinator Tony Lohner.

Thus Syncom will not only travel far in space; it will, thanks to Bob Special, make the full circuit of publications too.

Galactic Suburbs

The earth's sun is located far out in one of the Milky Way's spiral arms, some 33,000 light years from the galaxy's center.

COMMUNITY DEVELOPMENT PLANS FOR TOMORROW

Staff Members Have Varied Responsibilities Ranging From Public Talks To Bird Counting

Except for the efforts of the LOC Community Development Office, it would not be unreasonable to expect half of the NASA employees at Cape Canaveral to be living in tents by 1970.

Brevard's population today is about 134,000, but the nation's space programs will probably double this figure by the end of the decade. Boosting the development of housing and support services for this huge influx is a major duty of the Community Development Office, directed by Paul O. Siebeneichen.

Simply put, the office is a clearing house for information, but of rather wide extent. "We try to point the way to solution of the many problems of community development, as related to NASA's activities with all their ramifications, and this covers a considerable area," admits Siebeneichen.

Six Counties

Brevard and its five neighboring counties form the areas of greatest concern to Community Development. Known collectively as the Cape Canaveral "impact area," these counties must be continually informed of LOC's current and planned personnel strengths.

Siebeneichen often speaks before councils, commissions, citizen groups, and businessmen, to impress them with the effects and requirements of LOC growth.

These duties are shared with two staff members; Wright Kerns and John Donovan.

Impact Committee

Siebeneichen is also a member of the Joint Community Impact Coordination Committee (JCICC). Established in 1961 to assure that NASA, the Air Force, and the state, work in a coordinated fashion, the Committee provides identity, analysis, and recommendations, in connection with problems of impact area development.

Day to day duties of Community Development are not all meetings and speeches. During the last Saturn launch, for instance, Siebeneichen had the job of official "bird watcher."

As reported in an earlier edition of SPACEPORT NEWS, the Department of Interior has been concerned with possible effects the metallic bird's terrible roar might have on the feathered variety, so they went to see.

Siebeneichen trudged through the mud and marsh with the wild-life officials on Canaveral's western edge and counted 2,700 birds in 40 varieties resting before SA-3 took flight.

The Saturn and the birds experienced almost simultaneous liftoff, but happily only the Saturn stayed away. The birds fluttered passively back to their ponds after a few moments.

Secretary-receptionist Virginia Dixon said the office often receives interesting phone calls. High on the list of telephone topics are requests for actual missiles, second-hand spacecraft, and astronauts (for personal appearances). Usually the callers are serious; i.e., mayors who wish to dress up city hall's lawn, tourist attractions, or museums.

Since the office is in such close touch with many government officials on the community level, many people submit odd requests for help, from fixing traffic tickets to unstopping sewers. Since Community Development can act only in an advisory capacity, such functions are out of the office's balliwick.

Calls from panic-stricken community dignitaries asking if it's really true that NASA just bought their town, are becoming so common, Community Development could almost qualify for an alternate title, "Bureau of Rumor Squashing."

It will not be by lucky accident that adequate schools, homes, hospitals, roads, airports, and even mosquito control exist for future NASA employees and their families; only the analysis and planning of the Community Development Office can make such needs known in advance.

LOC'S LIAISON with local communities is handled by Paul Siebeneichen, left, Chief, Community Development, Wright Kerns, standing, and John Donovan.

Webb Says U. S. Leads Race To Land On The Moon

NASA Administrator James E. Webb believes U.S. explorers will beat the Russians to the moon before the end of this decade.

He told members of the National Transportation Institute that by 1970 America may be sending manned space flights to Mars and Venus.

"It is apparent that our national defense, perhaps even our national survival, demands that we act to insure that no hostile force will be permitted to use space as an unchallenged avenue of aggression against us," he said.

"Space exploration and allied research promises the greatest rewards for mankind in applying discoveries from this field to everyday living."

Webb said test flights of the Kiwi nuclear rocket engine will begin in 1966-67, and "with our ability to speed up work we could make it usable by 1970 for manned flights to the planets."

WEATHER SATELLITE CONTRACT AWARDED

NASA has awarded a contract to study overall systems requirements for a Synchronous Meteorological Satellite (SMS) to Republic Aviation Corp., Farmingdale, N. Y.

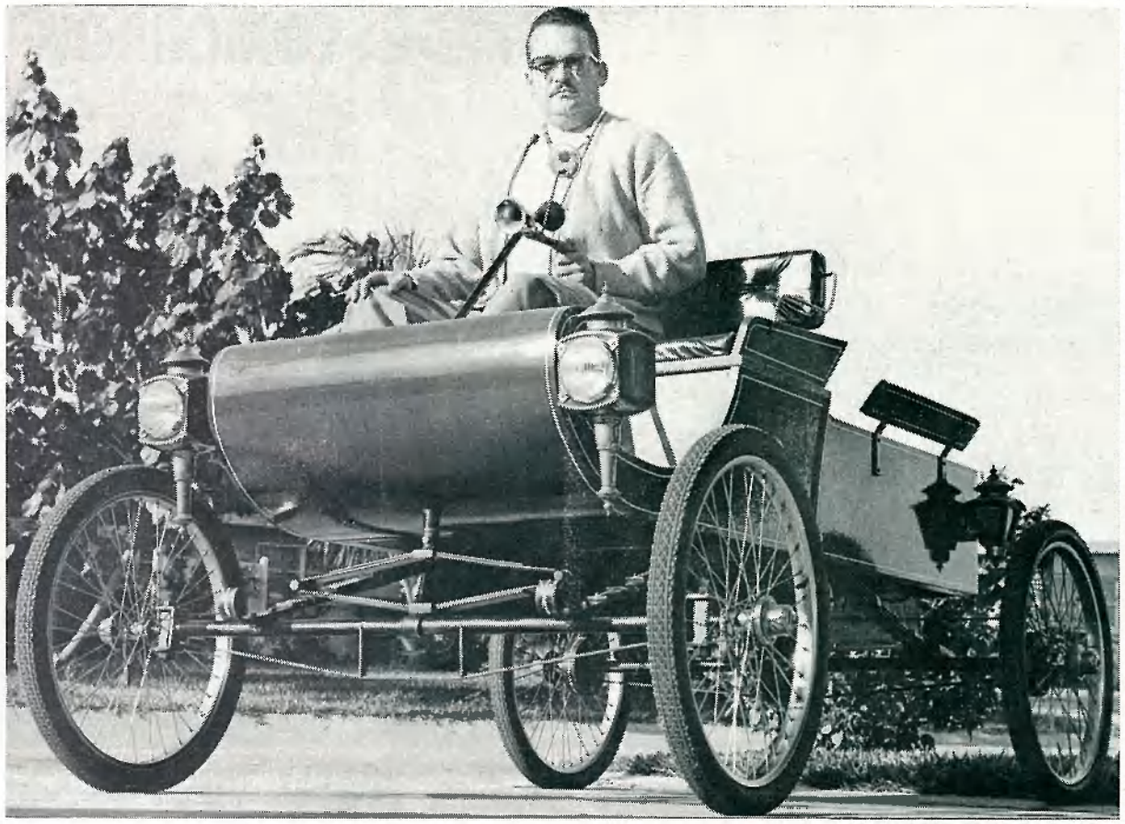
The $136,640 contract calls for a four-month study by Republic to determine the technical systems needed for 24-hour surveillance of the earth's cloud cover and to identify the major scientific and engineering advances required for the spacecraft and the ground stations.

As currently envisioned, the SMS would be placed in a synchronous orbit at an altitude of 22,240 miles, with a programmed life-time of one year.

Scheer Gets New Post

NASA Administrator James E. Webb has announced the appointment of Julian Scheer as Deputy Assistant Administrator for Public Affairs.

Scheer has been serving as consultant to the Assistant Administrator for Public Affairs, George L. Simpson, Jr., since last November.



ATTRACTIVE AUTOS like this shiny model of a 1901 Oldsmobile were among the most popular in grandfather's day. John Zepp built this authentic model himself from parts he found in used auto parts and scrap yards.

Zepp Zips Around Town In New '01 Olds

Most people pride themselves in ownership of a late model car.

Not NASA employee John Zepp, whose pride and joy is a model of one of America's famous early autos, a 1901 Oldsmobile.

He is rightfully proud, for he not only drives Cocoa Beach's number one conversation piece, he built it.

Zepp's auto, steered by a tiller as were all cars in the 1900's, is authentic. It was constructed from plans and diagrams similar to those used by the builder of the original model, Ransom Olds.

Zepp's model, with its shiny wire wheels and brass fittings attracts equal attention today.

The frame and body are identical with those of the original Oldsmobile. The engine, drive, and lighting systems are more efficient.

Under the driver's seat, not the hood, is a modern four-cycle air-cooled engine like those used for power mowers. It is rated at five horsepower.

A second - hand Crosley transmission was modified to fit the limited space, and the rear wheels are driven by chains from an old motorcycle.

Inside the authentic headlamps, tooled from sheets of brass and wood, are sealed beam lights powered by a 12-volt battery. The tail lamps meet Florida motor vehicle registration requirements.

Zepp estimates that he worked on the auto ten hours a week for 15 months to get it in running shape.

He had to search for parts that might be adapted to the vehicle. Dealers in antique autos and parts were seldom willing to help him, but used auto part dealers and salvage yard operators were always cooperative.

"Scrap pipe and fittings, and parts from old buggies, power saws, combines, and autos were modified to become serviceable accessories," he said.

The auto body is constructed of 3/4 inch marine plywood, and is painted with nine coats of enamel. It is suspended over the axles by two half - elliptical four - leaf springs that Zepp says provides a pleasant ride with something of the action of a hobby horse.

The first time he road tested the auto — without a license — he was stopped and warned by a policeman. Obtaining Florida registration, he found, was difficult. He had no documents.

He finally convinced motor vehicle department officials that he was the owner and manufacturer.

Surprisingly, Zepp can, with favorable tailwinds, get speeds up to 55 mph.

"If the wind is against me though," he says, "I have to go into second gear."

Speed has, in fact, gotten him into difficulty. He was once given a ticket for doing 16 mph on the beach. That's one mile faster than the maximum allowable speed.

Antique Prices

Next Wednesday is the deadline for purchasing 1963 auto license tags. John Zepp always buys his plates with a smile on his face. He pays only $5 for an antique auto tag that carries the designation — Q. To qualify for this, however, he must have his Olds inspected every year.

Wind Study Undertaken At Marshall

Two Marshall Space Flight Center men have been working for years on a problem they haven't even seen yet.

The problem is the wind and how it affects rockets.

Low level winds pose quite a problem for fueled rockets locked to the launch pad at Cape Canaveral. The winds may act like an invisible river, with eddies, swift streams, swirls and up and down drafts or undertows.

Airplane passengers have felt the effects too, when craft fly through turbulence. But rockets do not have the "give" built into them as airplanes do.

William W. Vaughan and James R. Scoggins of the MSFC Aeroballistics Division propose an exchange of information on low level wind effects based on information which may be obtained at several points in the world.

The men said one of the most important areas of influence on structural and control system design for space vehicles is that produced by the "dynamics of the atmosphere."

Rockets, of course, must plow through this turbulence under full power. This buffeting could affect the structure of a rocket, although the first three huge Saturn rockets have made perfect flights.

Later rockets will be considerably taller and could get up to 14 inches of "top sway" while sitting on the launch pedestal.

Studies have shown, however, that the turbulent stress is stronger near the base of the rocket which is holding up considerable weight and locked to the pedestal, unable to sway with the wind.

Petrol By The Pint

Volkswagens, Renaults and their cousins all take a backseat to John Zepp's 1901 Olds when it comes to economy. He estimates getting 65-70 miles to the gallon. His gas tank doesn't quite hold a gallon, however, so he usually buys his gas by the pint or quart — to the dismay of local service station owners.

VALUABLE GEMS AWAIT ASTRONAUTS IN SPACE

☆ ★ ☆

NASA SCIENTISTS SAY LUNAR SURFACE MAY HAVE RICH ORES

Looking around for a bargain in engagement rings?

If you can hold off a few years, the advent of nuclear powered rockets may make it possible for you to encircle your fiancee's finger with a gem from the moon.

According to Dr. Eugene B. Konecci, NASA's director of bio-technology and human research, it is quite possible that the moon contains such rare materials as diamonds or other gems.

Speaking at a conference of the Manufacturing Chemists' Association in New York, Dr. Konecci said nuclear fuel would reduce the cost of each pound of payload, and allow for the recovery and return to earth of lunar ore and possibly precious materials.

It all depends on how long your fiancee will wait.

Meteorites, Asteroids Defined, Explained

A meteorite is any object originating elsewhere in space that penetrates the earth's atmosphere and actually strikes the surface.

Although an estimated 500 meteorites fall onto the earth every year, only an average of four are recorded.

About 92 per cent of the 1,544 catalogued are stones consisting of silicate minerals. The rest are iron or a combination of stone and iron.

The oldest known recording of a meteoritic impact was logged in the French-Alsatian town of Ensisheim at 11:30 p.m., November 16, 1492.

Of all the documented cases, there is only one instance where a meteorite struck a human — Mrs. E. H. Hodges of Sylacauga, Alabama, as she rested on a sofa after lunch.

Asteroids are objects, small by planetary standards, that circle our sun between the orbits of Mars and Jupiter. Thought to be bits of planets that long ago disintegrated, the asteroids vary widely in shape and size.

"SAY, PARDNER—IS THET "SPACE AGE" PLACE ENYWHAR NEAR THE WIDE OPEN SPACES?"

Asteroids Worth Trillions In Rare Platinum Metals

The capture and return to earth of asteroids rich in rare metals may be one way of making space exploration pay off in hard cash.

Reports presented at a recent meeting of the American Astronautical Society infer that trillions of dollars worth of these metals are "there for the taking."

The reports said that asteroid Ivar would alone yield $50 trillion in rare platinum metals. To collect these riches would cost the U.S. about $10 billion for a profit of a cool $49 trillion, 990 billion.

Ivar, some three miles in diameter, comes within 45 million miles of earth during its orbit around the sun.

It is one of the millions of asteroids that spacemen could capture with the technology expected during the next decade.

Some scientists even suggest adapting Apollo moon rockets for such missions.

Under such a theory, astronauts would land on an asteroid and determine its metallic value by taking samples.

The platinum in some asteroids is estimated to be worth up to $1,000 a pound.

If selected, an asteroid would be knocked out of its orbit and steered to earth by detonation of one or more nuclear bombs — literally turning it into a spacecraft.

NASA Wives Meet

Mrs. C. Q. Stewart and Mrs. J. W. Ault served as co-hostesses at the monthly NASA Wives Club meeting held at the Patrick AFB Officers Club.

Bridge prizes were won by Jo Schmyser, Mrs. Paul Laeger and Mrs. C. A. Guthrie.

Door prize winners included Mrs. R. A. Petrone, Mr. R. M. Johnson, Mrs. Kurt Debus and Mrs. Wilbur Allabach.

Mrs. A. H. Knothe was presented an orchid corsage honoring her birthday.

We're All Astronauts

If you're one of those earth - bound individuals who's vowed "they'll never get **me** into space," hold on to your seatbelt; you're traveling at 66,0.0 mph right now!

The earth, in a whirling orbit around the sun, will travel 578 million miles this year. That's a journey equal to about 1200 round trips to the moon.

☆ ★ ☆

EARTH METEORITES FOUND TO CONTAIN DIAMOND SAMPLES

Goddard Space Flight Center astrochemist Dr. Michael E. Lipschutz has discovered diamonds in a meteorite which fell in India 90 years ago.

He made the discovery while using an x-ray analysis technique on minute samples of the Dyalpur meteorite which fell to earth on May 8, 1872.

A tiny fragment of the meteorite is in the Chicago National History Museum, which allowed Dr. Lipschutz to remove about one thousandth of a gram for his research project.

Although meteoritic diamonds have been known since 1888, x-ray techniques have confirmed their existence in only three other meteorites.

560-Foot Deep

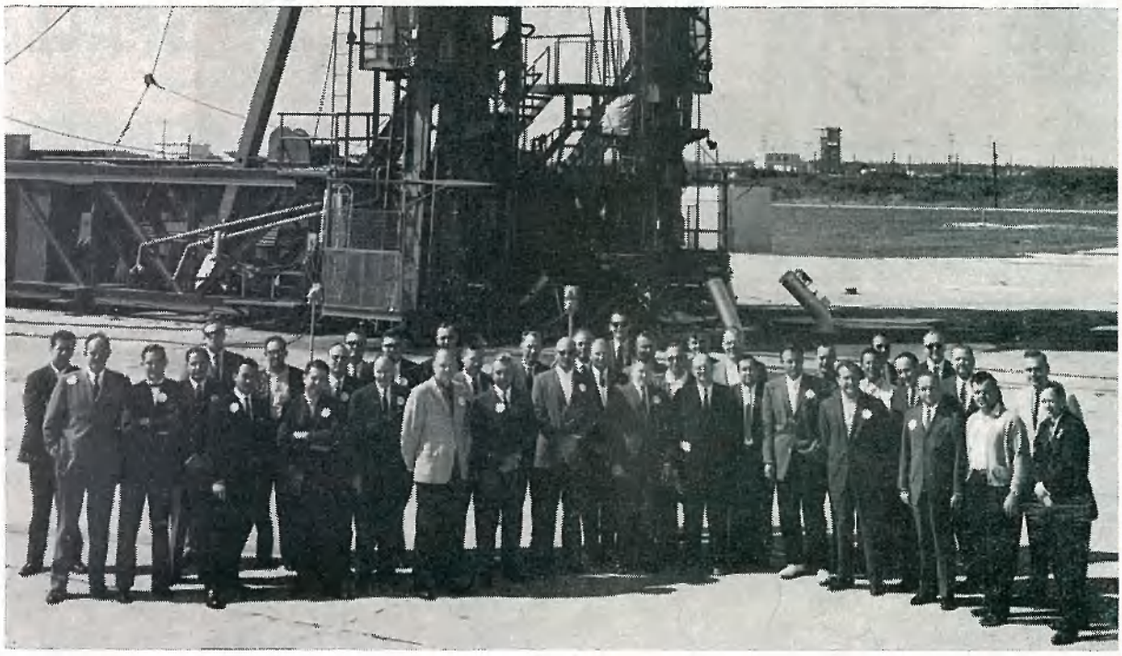
The most famous meteorite is Canyon Diablo, or "Great Arizona Meteorite," which weighed about half a million tons when it struck the earth. It made a crater about three-fourths of a mile wide and could hold the Washington Monument in its 560-foot depth.

Dr. Lipschutz, in a published paper, showed that diamonds formed in this meteorite by shock transformation from graphite when it impacted. X-ray analysis revealed the presence of diamonds in 1939.

Dr. Lipschutz recently received the Dr. H. H. Nininger Award of Arizona State University for research work on diamond formation in the iron meteorites, particularly Canyon Diablo.

Reliability Officers Tour NASA Centers

Dave Liberman and Abe Moskovitz, of NASA's Office of Reliability and Quality Assurance, Washington, conferred with the LOC Reliability Office during their survey of NASA Centers. They discussed a proposed NASA-wide document concerning contractor reliability requirements for space system contractors.



YOUNG PRESIDENTS, all chief executives under 40, of companies with sales topping $1 million annually, were given a briefing and Cape tour Friday. The group also heard a talk on the Apollo program by G. Merritt Preston, Director of MSC Pre-flight operations.

SPACE ALMANAC

A CHRONOLOGY OF EVENTS IN SPACE EXPLORATION AND RESEARCH.

Feb. 18, 1958—Russia fired a single-stage rocket to a 294 mile altitude with 3,340 lbs. of instruments for measuring ion composition of the atmosphere, pressure, temperature, and micrometeorites.

Three Years Ago

Feb. 16, 1960 — The first color photographs of the earth from high altitude were released. The photographs were recovered in the data capsule of a Thor that was launched in December, 1959.

One Year Ago

Feb. 20, 1962 — NASA's MA-6 Mercury launch was a success. Lt. Col. John Glenn, pilot of the Friendship 7 spacecraft, orbited the earth three times and reentered the atmosphere for a safe landing in the Atlantic Ocean after four hours and 56 minutes of flight.

Three Attend Meet

G. A. Michaud, Carl Dahl and Thomas Davis of LOC's Procurement and Contracts Office attended the recent "Business Opportunity Days" meeting in Miami.

DR. DEBUS TO HEAD LOCAL BOND DRIVE

LOC Director Dr. Kurt H. Debus has been named chairman of the annual Brevard County Payroll Savings Bond Drive by the U. S. Treasury Department.

Dr. Debus designated March 18 - 30 as the dates for the county-wide campaign to boost employee participation in the Payroll Savings Bond Plan.

All companies and businesses in the area that participate in Payroll Savings are urged to actively join in the drive.

"Every patriotic citizen should be aware that the Payroll Savings Bond Plan is one of the best ways to insure a strong America because by buying U. S. Savings Bonds we battle the double economic ills of inflation and recession at the same time," Dr. Debus said. "It obviously adds up to personal savings, too."

"Never in our history could this be more important, because we Americans have committed ourselves to be first in defense and first in the exploration of space," he added. "Both of these achievements must be launched from a solid economic structure."

Dr. Debus said all companies in the county will be contacted over the next few weeks to organize for the drive.

"What you should use for rocket fuel is Bufferin. It works twice as fast!"

Tommy W.
Evanston, Ill.

NASA NEWCOMERS

NASA-Cape employees have increased by 20 since last week:

Facilities: Howard B. Yates, Jr., Peter J. Kennedy, Noah L. Pluckett, Kinard N. Turpin, III and Herman Brunke.

Personnel: Blanche Mills, Frances Thompson.

Mechanical, Structural and Propulsion Br., LVOD: Carl B. Miller.

MSC Preflight Operations Division: Lawrence E. Dyal, Frederick L. Hettinger, Kenneth L. Johnson, Bernard L. Staffel, Richard B. Battin, and Lorenz Simpkins.

Communications Design Unit: John Kirby.

Corps of Engineers Supervisory Unit: Gordon Olson.

Industrial Area Maintenance Section: Garrett Gough.

Protocol: Walter H. Decker.

Technical Information: Juanita Hall and John Bentley.

MARION, OHIO, FIRM GETS NOD TO BUILD CRAWLER VEHICLE

NASA has selected the Marion Power and Shovel Company of Marion, Ohio, to design and build a gigantic crawler - transporter vehicle which is to:

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

. . . Haul it a little over two miles, all the while keeping it within about one-tenth of a degree of true level, and deposit it gently on a launch pad of Complex 39, Merritt Island

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

Key Element

The crawler is one of the key elements of planning for LOC's Complex 39 from which manned lunar Apollo missions will be launched. The plans call for Apollo Saturn V to be assembled in a 520 foot tall Vertical Assembly Building and transported via crawler to a launch pad for fueling, final tuning up and boarding by astronauts.

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

NASA plans to buy two crawlers to serve the three or more pads that will be built at Complex 39. The vehicles will cost between $4 and $5 million each. The first should be undergoing test runs at the Merritt Island Launch Area by late 1964.

The Marion Company was one of 22 companies attending a NASA briefing on the crawler request or proposals on December 17, 1962 at Cape Canaveral. Bids were submitted by only two companies on January 15. NASA and Marion will negotiate a cost-plus-incentive-fee type contract.