SPACEPORT NEWS

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$23.5 Million VAB Pact Goes To U.S. Steel

A contract for more than $23 million — the largest single pact ever awarded for NASA work in the Cape area —has gone to United States Steel Corp. to provide structural steel for the Vertical Assembly Building in MILA.

The contract was signed Tuesday by officials of the American Bridge division of the steel company and Col. G. A. Finley, Canaveral district engineer, acting as agent for NASA.

July 9

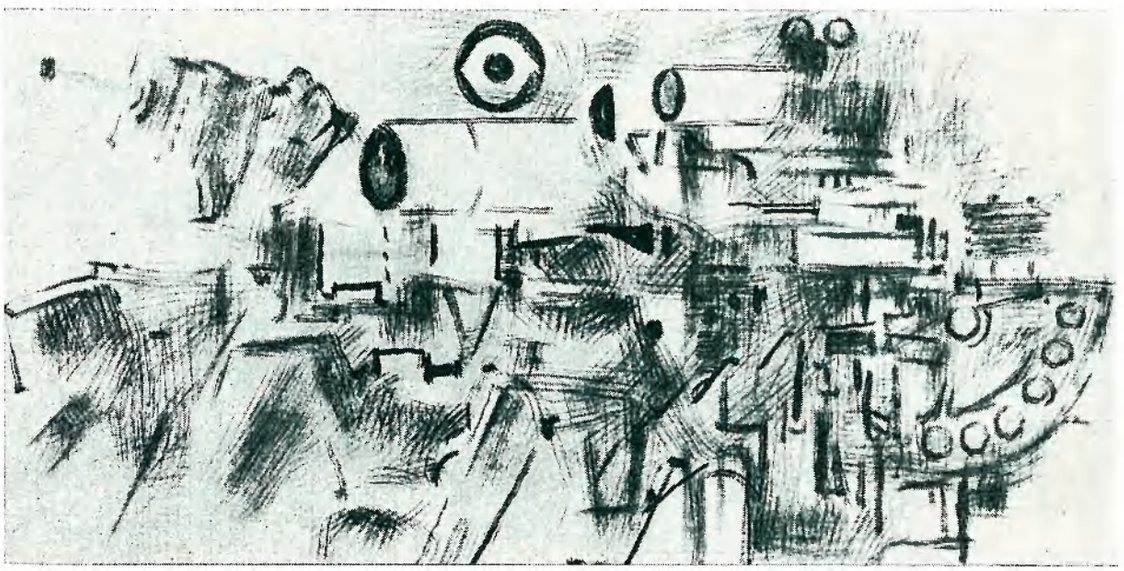
16-Month Job

Amount of the contract was $23,534,300. The work will take about 16 months.

Some 50,000 tons of steel and 25,000 tons of concrete will go into the construction of the 524-foot-high VAB where Saturn V/Apollos will be erected in an upright position for transport to the launch pads of Complex 39 about 3.5 miles away.

Another contract is expected to be signed this week for more than $8 million for foundation work on Complex 39. Blount Brothers of Montgomery, Ala., has submitted an

(See CONTRACT, Page 8)



WHAT IS IT? Even an art expert would have difficulty describing the above scene. Actually, it's a sketch of tracking cameras at Cape roadblock 17, drawn during the MA-9 mission by artist Lamar Dodd. For the story on NASA's Cooperative Art Program and sketches by other famous artists, turn to Page 4.

Busy Relay Booked Solid Since Launch

With the return of President Kennedy to Washington, NASA's communication satellite "RELAY" marked the end of its busiest programming and six-months of successful operations.

The experimental satellite has been booked solid by the United States television networks to cover the President's trip to Europe, the death of Pope John XXIII and the election of Pope Paul VI.

Since early January, RELAY I has been used for 85 public demonstrations including transmission of television, voice, radio-photo and teletype.

The first public demonstration of RELAY I was January 9 when the NASA satellite sent pictures of the opening of the Mona Lisa unveiling at the National Gallery of Art in Washington. Viewers in Europe expressed amazement at the clarity of the picture sent via the satellite some 4,000 miles above the Atlantic Ocean.

Public demonstrations handled by RELAY I include 37 television, 29 voice, 13 facsimile, six teletype and four data processing.

THE INSIDE STORY

SPACE FLIGHTS OF FUTURE TO GET 'CORNY'

Space may get "sweet and corny" in years to come.

At least if studies by Dr. Dale Moss of the Connecticut Agriculture Experiment Station prove feasible, astronauts of the future may carry corn stalks and sugar cane in their capsules on long journeys into space.

One of the major problems with spacecraft to date has been the inability to remove carbon dioxide from the confined air.

In the closed system of a space ship a man could expire in seconds if too much carbon dioxide accumulated, and two per cent concentration is the limit in which he can function efficiently.

Therefore when man leaves for interplanetary travel, he must either take plants with him, or weight down his spacecraft with compressed oxygen in containers, apparatus or chemicals to remove carbon dioxide from the air, and stored foods. Compared with these, the weight of plants in negligible.

In his first experiments, Dr. Moss used corn, and to his astonishment he found that it was highly efficient in removing carbon dioxide from the air in both high and low concentrations.

The rate for most plants is about 300 parts per minute. For corn it was 700. Sugar cane, another giant grass, was found to be even more efficient.

On the basis of present knowledge, Dr. Moss believes that five square feet of cane leaves could probably support a man in a closed system.

If the best production rate so far achieved can be maintained for an extended period on closely packed leaves, indications are that a chamber four feet square could supply oxygen and food for 10 men during an extended stay in space.

SPOTLIGHT

BRIGHT FUTURE

Cape Canaveral's future as a spaceport seems assured "for a long time after 1970."

NASA officials told Representative Ed Gurney of Florida's 11th District recently that there is "glowing promise for the Cape's future in NASA's present plans." They said that it is certain that the vast complex at Canaveral will be active a long, long time.

Congressman Gurney was told that NASA's post moonshot program planning is so vast that there can be no question that Cape Canaveral will remain on active duty for many years.

They said that, for one thing, study is being given a Mars landing shot, at a time not yet estimated firmly, and that Canaveral would be used for this and for the same reasons it will be used in the Lunar Landing Program.

And beyond that, the nation of the future will need spaceports, and NASA envisions the Cape area as perhaps the first and certainly one of the greatest of these.

TO PROSPER OR FLOUNDER?

The road to the moon is long. Much of the road is hard and unglamorous.

Last year was the time for definition for the program; 1963 is the year of detailed design and the early phase of the ground test program. Spectacular milestones will be few.

Although each succeeding year will bring increasing evidence of accomplishment in the program, we should remember that the national effort must be sustained over many years for this project to be successful.

Our national pride was shocked by the Soviet Union's accomplishment of one of the greatest engineering feats in history — the launching of the first earth satellite in 1957.

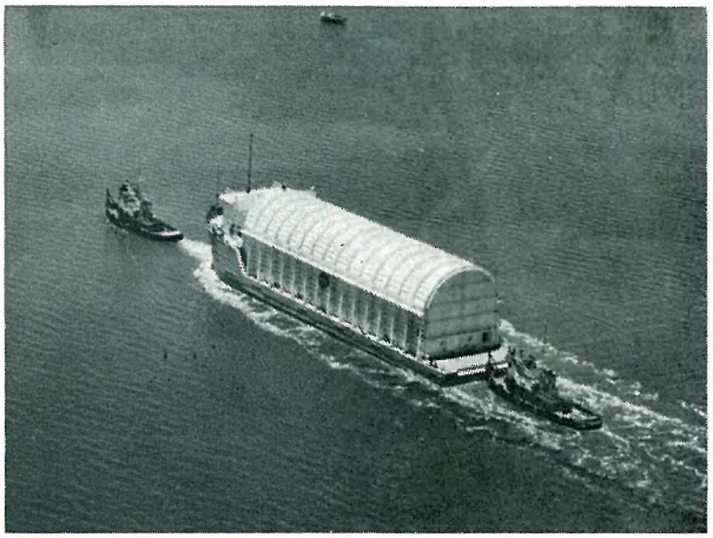
We have taken up this technical challenge and today have massed the skills of the nation for an assault on space.

This challenge is also to the communities. The face of America is changing. New industries seek new homes. The qualities which bring new facilities to an area must include an environment which can attract and hold the employees essential to the work. No longer will water, or real estate, or labor, or power, or even cheap taxes bring industry to an area. The intellectual climate also must be attractive.

The lunar program is but one aspect of the technological surge which is invading every element of our society. To respond to the surge is to prosper, and maintain United States' leadership in the world. To resist or ignore the challenge is to flounder.

SPACEPORT NEWS

Published each week by the National Aeronautics and Space Administration's Launch Operations Center, Cape Canaveral, Florida.



THE NASA BARGE Palaemon, kicking up Banana River mud, was photographed from a helicopter as it neared the Barge Canal last week on its way back to Huntsville. On board was the Saturn I ground test booster used to check out launch facilities at Complex 37.

News Photo by Charley Wilson

AF Major Rushworth Wins Astronaut Wings

U.S. Air Force Maj. Robert A. Rushworth has qualified for the military rating of pilot astronaut by flying the X-15 to an altitude in excess of 50 miles at the NASA Flight Research Center, Edwards, Calif.

The 38-year-old Major became the second pilot to win his Air Force astronaut wings in the X-15. He reached a maximum altitude of 286,000 feet in a recent 13-minute flight. He passed the 50-mile altitude at 264,000 feet.

Flying the X-15 No. 3, Maj. Rushworth attained a maximum speed of 3,545 miles per hour (5,200 feet per second), or Mach 4.73, at an altitude of 153,000 feet.

The X-15 holds the world altitude record for winged vehicles of 314,750 feet, reached July 17, 1962, with Air Force Maj. Robert White at the controls.

NEW PLATEAU

The NASA-MILA Federal Credit Union, now 252 members strong, has reached a new plateau — $10,000 in deposits. This goal was reached in the short span of five weeks.

Credit Union officials also report loans of $5,500 have been made to members.

SPACE ALMANAC

A CHRONOLOGY OF EVENTS IN SPACE EXPLORATION AND RESEARCH.

5 Years Ago

July 17, 1958—Nose cone of Jupiter missile successfully recovered after intermediate range flight.

3 Years Ago

July 11, 1960—NASA selected Hughes, North American, Space Technology Labs., and McDonnell to study designs for the first lunar soft-landing spacecraft.

1 Year Ago

July 10 — Launching of Telstar at Canaveral marked the tenth straight successful flight of the Delta rocket.

July 11 — First east-to-west transatlantic TV transmission, reflecting eight minute telecast off Telstar from France to Andover, Maine.

July 11 — Senate passed NASA authorization for FY 1963 of $3,820,515,520.

Zip Number: 32931

Although rocket mail may be a few years off, NASA employees can speed delivery of mail now by adding LOC's "zip code number" to the return address on all outgoing mail from the center. Our zip code number is 32931.

Martian-Like "Taxi" To Ferry Astronauts

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

Technical responsibility for the program has been assigned by Ford's Aeronautronic Division to Dr. Franklin P. Dixon, manager of Advanced Space Systems for Engineering.

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

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

Aspects being studied include trajectories, weights and preliminary design, rendezvous, propulsion requirements, life support systems, Martian atmospheric entry, Mars surface operations, long lead-time requirements, funding requirements, and other critical factors.

Welding Important To Rocket Assembly

Welding plays a big role in the manufacture of space vehicles.

Engineers working on the huge Saturn rockets at the Marshall Space Flight Center report that the "baby" of the family, the Saturn I, has about three-quarters of a mile of welds.

The Saturn V Apollo moon rocket, now in design, will have about one and one-half miles.

Rocket tanks are made of flat sheet metal, welded together and formed into cylinders. Every inch of weld requires intensive inspection, usually by X-ray techniques.

EXPLAINING SATELLITE display at the Florida Showcase in New York City is LOC Director Dr. Kurt H. Debus. He is being interviewed by Pat Fontaine of the "Today" television show. The exhibit, jointly sponsored by NASA, the Air Force and the AMR Public Relations Association, has been extended for two weeks at the request of Florida officials. It will remain in New York until August 4.

QUESTION: HOW TO MAKE A COMET? LEWIS SCIENTISTS SEEK ANSWER

How do you make a comet?

This is a problem that NASA scientists would like to solve and they hope that a series of sounding rocket experiments will provide some answers.

If the experiments show that making a comet is successful, NASA would consider launching an artificial comet around the sun to provide researchers with a chance to study the the sun's action in interplanetary space.

The Answer

Explains Andrew E. Potter, Jr., scientist with the Reaction Kinetics Section at NASA's Lewis Research Center, a successful man-made comet would answer a lot of questions. Information obtained, he said, would be most helpful in future space missions beyond the moon.

"If the simulated comet duplicates the behavior of an actual comet, we will have a better understanding of natural comets," Potter said.

"This is important because a current theory holds that comets are composed of the materials of our solar system at the time it was formed. Knowing precisely what this cometary material is may tell us something about conditions in the universe at the time our solar system was born," he added.

The first sounding rocket tests will be aimed at finding out if chemical reactions initiated in space can produce gas and dust clouds similar to those of a comet. Chemicals will be ignited at altitudes of about 70 miles and researchers hope that large clouds of colorful glowing gases will be produced.

Sun Stimulates

Most natural comets are invisible in interplanetary space beyond Mars. They begin to light up and become visible as they near the sun.

A comet does not generate all its own light. Apparently sunlight stimulates a comet to produce huge clouds of gas and dust which reflect the sunlight very well.

LABOR DAY CRUISE

Plans are underway for a Labor Day weekend cruise from Port Canaveral to Nassau for NASA and contractor employees and their families.

A cruise ship is scheduled to depart from the Port Friday evening, August 30th, and return Monday night, September 2nd. This would give travelers three days and two nights in Nassau.

Tickets will range, according to accommodations, from approximately $55 to $110. The cruise ship will carry 402 passengers. For further information, call UL 3-6089.

FAMOUS ARTISTS SKETCH MA-9 SCENES -

Some 60 sketches made during Astronaut Gordon Cooper's MA-9 mission have been completed for NASA under its Artists' Cooperation Program.

The working sketches—pen and ink, charcoal, and wash drawings — were made by seven nationally known artists at Cape Canaveral, and one in the prime Pacific recovery area.

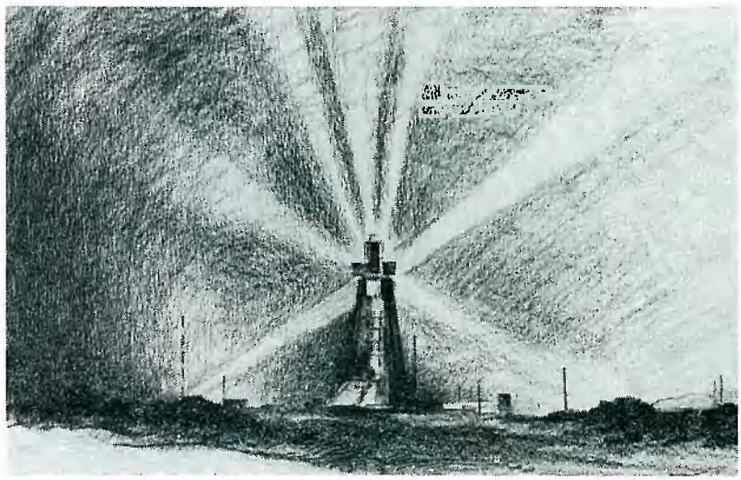
MA-9 activity was the first event which the artists were invited to cover. Other NASA activities of historic interest will be recorded by artists.

The sketches are preliminary to the artists completing finished paintings of their impressions of MA-9 activity. The paintings and sketches will become Government property and will be exhibited on tour nationally before being placed for indefinite display in Federal buildings and museums.

In addition, reproductions will be made available for tours to schools and other public institutions throughout the country. Other reproductions will be used by NASA to illustrate publications, documentary films, and other graphic presentations.

The Artists' Cooperation Program was instigated by NASA Administrator James E. Webb in March 1962, with the cooperation of Director David E. Finley of the Fine

Cooper by Mitchell Jamieson



Pre-dawn Darkness at Pad 14 by John W. McCoy II

Transfer Van at Hangar S by Robert T. McCall

Cooper by Robert T. McCail

MA-9 Liftoff by Robert T. McCall

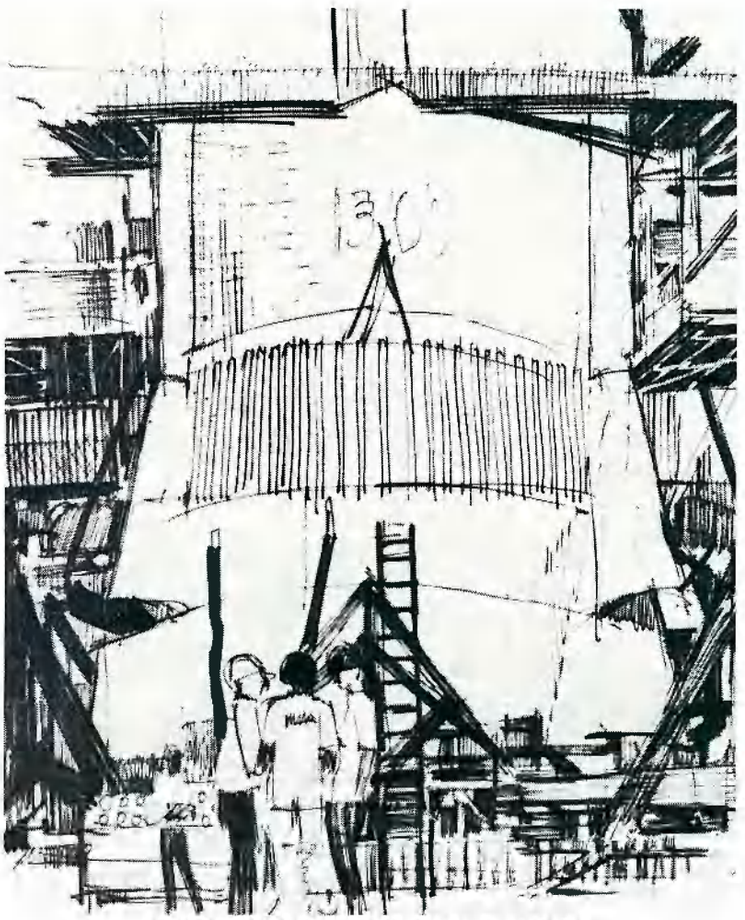
Cape Beach Area Looking North by John W. McCoy II

AS FIRST PART OF NASA CO-OP PROGRAM

Arts Commission and Director John Walker of the National Gallery of Art.

Under the program, a number of Nationally-known artists will be invited to visit NASA sites and record their impressions in drawings and paintings. Such eye-witness records were first used in the United States during the Revolutionary War, and later in the Civil War, both World Wars and, recently, in an official U.S. Air Force program.

Administrator Webb said, "Important events can be interpreted by artists to give a unique insight into significant aspects of our history-making advance into space. An artistic record of this nation's program of space exploration will have great value for future generations and may make a significant contribution to the history of American art."



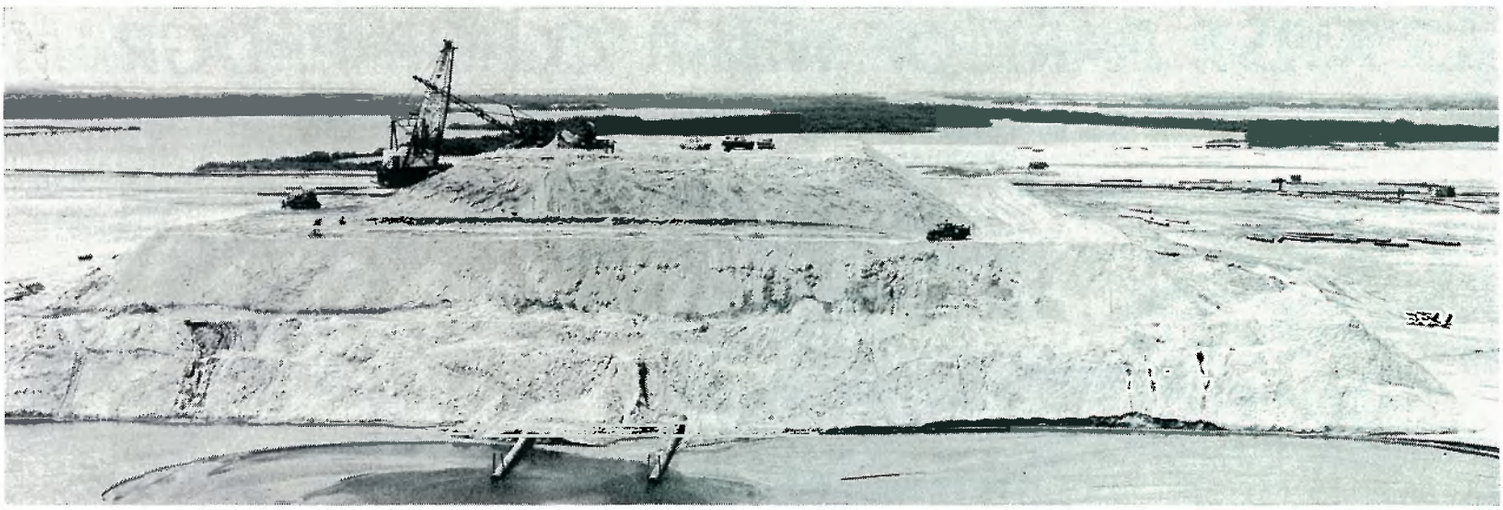
MA-9 Vehicle Preparations by Paul Calle

Aboard the Kearsarge by Mitchell Jamieson

Post-Flight Press Conference by Mitchell Jamieson

Cooper by Robert Shore

Cocoa Beach Parade Crowd by Mitchell Jamieson



RISING ON MERRITT ISLAND like a giant, three-tiered cake, is Launch Complex 39's Pad A. Size of the massive dirt columns is even more accentuated by the miniscule-looking vehicles.

MARSHALL VISITORS GET SPACE EYEFUL

Hundreds of visitors every week are getting an eyeful of the space age in one stop at the NASA-Marshall Space Flight Center.

They push the "fire" button used to launch America's first satellite, Explorer I. And nearly everyone runs his hand across the protective coating of the first full-size nose cone recovered from outer space.

These "relics," actual rocket engines and spacecraft models, are seen at the MSFC Space Orientation Center.

Historians Paul Satterfield and Mrs. Evelyn Falkowski explain the 12 exhibits to as many as 500 persons a day.

Visitors signing the register write their names on pages often signed by famous rocket scientists as well as an occasional entertainment world celebrity — Gloria Swanson and Dave Brubeck, for instance.

High school and college groups from a four-state area are frequent visitors to the Marshall Center. Foreign students — from the nearby guided missile school — and groups of businessmen and women's clubs also make the tour.

For those interested in the "way-out" space travel there are movies showing moon and interplanetary trips.

A mammoth Saturn I booster and a Jupiter missile are exhibited in front of the museum.

Task For New Astronauts: To View The Gegenschein

Space scientists say the time has come when everyone should stop taking a dim view of the gegenschein.

In fact, they would like future astronauts to take a good sharp look at it.

What is the gegenschein?

A Faint Glow

The gegenschein is a faint glow about 20 times larger than the moon. It appears directly overhead every night at midnight when the sun is at high noon on the opposite side of the world.

Because of our murky atmosphere and the reflection of city lights the gegenschein is hidden from most ground observers. It can be seen occasionally by earth-bound star gazers, but not well enough to tell exactly how far away it is.

Good Sighting Point

Scientists at NASA's Lewis Research Center believe that an astronaut, orbiting outside the interference of the earth's atmosphere, could sight and use simple mathematics to determine if the gegenschein is the proper distance from the earth to lie in what is called a space trap.

If the genenschein is really trapped, astronomers figure it must lie 980,000 miles from earth.

Space traps are inter-planetary regions where the gravitational fields of two celestial bodies, such as the sun and earth, can capture and hold a third smaller body in a fixed area relative to each.

Constant Location

Astronomers believe the gegenschein (from a German expression meaning behind the sun's shine) is made up of small fragments left behind by centuries of comets. If these tiny bits of matter are caught in a space trap, they would always appear in the same position above the earth. The gegenschein always appears in the same spot.

If the gegenschein is actually trapped, it is caught in one of five such spots where an object loses its right to orbit through space alone. Instead, it spins about within the confines of its trap and obediently trails the earth and sun through space.

NASA NEWCOMERS

Eighteen new employees have joined NASA at the Cape, Cocoa Beach and in Huntsville in the past three weeks.

LVO, Huntsville: Jack Short, and Wilson R. Dietz.

LOC: John D. King, George H. Hentz, Thomas J. Wills, Harry E. Gabbard, Huber L. McRae, Dean R. Wood, Elmer L. Green, Virginia R. Wood, Billy J. Martin, Perry H. Cain, Walter P. Baleyko, Patricia A. Fredrickson, Betty J. McGuire, Sharon L. Morlan, Alan M. Stowell, and Larry V. Morgan.

PHYSIOLOGICAL CASE OF PILOTS INFLIGHT TO BE RESEARCHED

NASA has selected Lear Siegler, Inc. of Santa Monica, Calif., to conduct a research program designed to maintain future aero-space pilots and astronauts in their best physiological state while in flight.

Total cost of the design study program is expected to exceed one million dollars.

The proposed system, called a psychophysical information acquisition processing and control system (PIAPACS), will have the capability to sense and record the various physical functions of the pilot and his vehicle.

NASA scientists, with the aid of computers, then expect to use this information to provide controls for maintaining the pilot and his environment in the best operational state.

First step in the 18-month program will be the development and construction of a unique sensor system mounted in the pilot's garment and headgear. This will replace the present system of attaching sensors to the pilot by the use of tape and internal instruments, and will permit acquisition of data on a continuous basis without discomfort or distraction to the pilot.

Data obtained from these flights will be recorded and processed for computer reduction, and be used to display immediately and continuously the psysiological and physical condition of the pilot at all times in flight.

High-Powered Satellites of Mid-'70s To Beam Radio and TV Programs Direct

Someday — by the mid-70's perhaps — high powered broadcasting satellites may be beaming radio or television programs directly to home receivers in a very large area of the earth. But the satellite will need a much greater power supply than today's communications satellites.

Leonard Jaffe, NASA's Director of Communications Systems, Office of Applications, says that such a satellite would have to have a power supply measured in thousands of watts.

Tremendous advances are necessary to accomplish this. For instance, NASA's second SYNCOM communications satellite, scheduled for launch this month, has a power supply barely measured in watts.

When injected into its 24-hour "stationary" orbit 22,300 miles above the earth, SYNCOM depends on solar cells to maintain sufficient power — 25 watts—for spacecraft operation. However, only 2 1/2 watts of power are needed to transmit signals to ground stations.

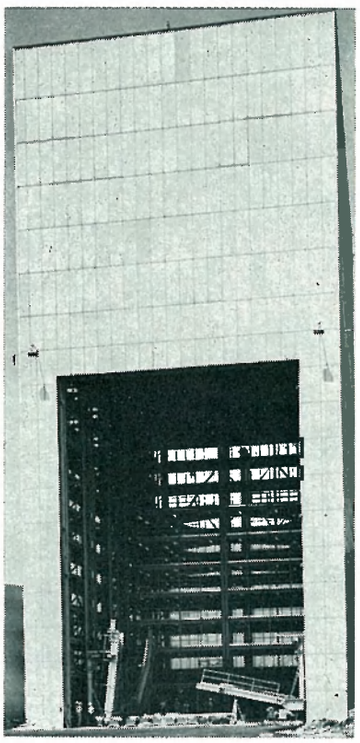
In the case of the high-powered communications satellite, there would be no need for a ground receiving station. To see a TV show originating in the United States, for example, a TV viewer in Europe or any other part of the world within range of the spacecraft, would merely tune his TV set to the satellite channel the same way he switches channels today.

Outer Space Creations

Two of the largest pieces of "outer space" ever created on earth, are nearing completion at NASA's Goddard Space Flight Center.

Space conditions will be simulated in two stainless steel tanks as high as six-story buildings, the predominant feature of a $15 million facility now being built at Goddard.

Satellites and other large space vehicles too big for most existing simulators will be tested inside the chambers.



THIS HYDROSTATIC test facility, 158 feet tall, is nearing completion at the Marshall Space Flight Center, Huntsville for use in the Saturn V program. Being built at a cost of $2 million, the facility, shown here with its 55 by 80-foot door in open position, is to be completed by August 15.

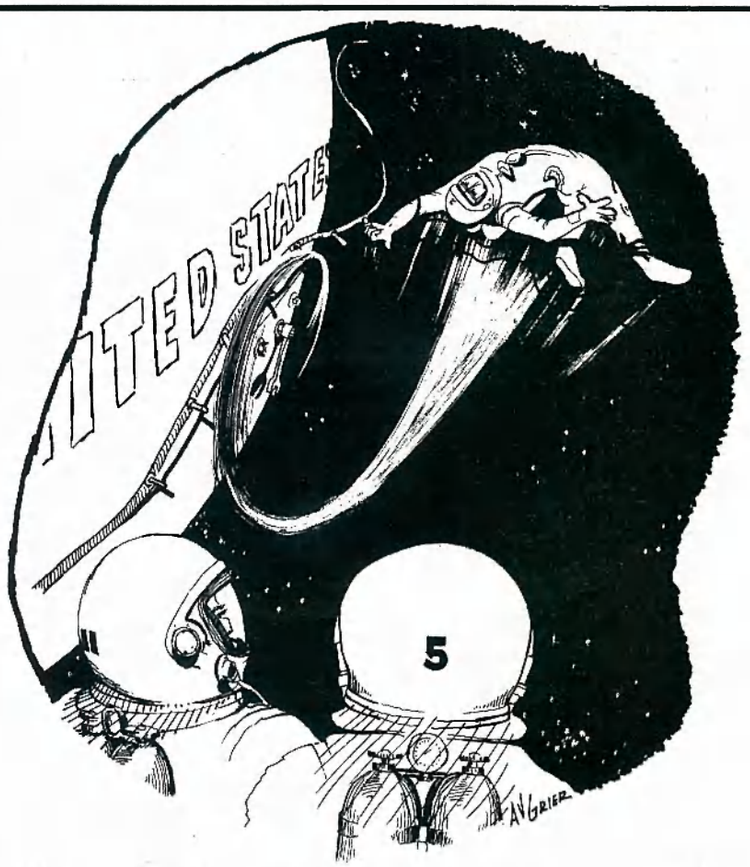
New Generation Thor To Double Thrust For Future Flights

A new generation of Douglas-built launch vehicles was introduced earlier this year with the debut of the Air Force's first liquid - solid booster, the Improved Thor, at Vandenberg Air Force Base, Calif.

Three Thiokol TX33 - 52 solid propellent rocket motors strapped to the booster, in addition to its Rocketdyne MB-3 liquid propellent engine, provide the Improved Thor with a thrust of approximately 330,000 pounds.

Following the "building block" concept, the booster's capability can be further increased by strapping on more powerful solids to lift heavier payloads as the need arises.

The Improved Thor can be combined with various upper stages. This generation of Thor liquid-solid boosters is expected to include other new super boosters which eventually will replace today's Delta and the Thor/Agena combinations.



"I SEE JONES IS HAVING TROUBLE WITH THE ADHESIVE LADDER AGAIN"

FUTURE MECHANICS MAY USE ADHESIVE TO KEEP FROM TUMBLING INTO SPACE

Space mechanics of the future will have unique problems to cope with.

There will be no earth-type "pit stops," and mechanical work will have to be done in the vast void of weightlessness.

With no gravity to contain him, the astronaut-mechanic is likely to find himself turning instead of the bolt he is trying to remove. He would be propelled backward with the first blow of a conventional hammer.

Scientists are working on solutions to such possibilities, when repairs do become necessary in outer space.

Already an adhesive that may enable astronauts to crawl outside their capsules has been developed.

It would be attached to small, metal disc resembling rivets. The astronaut need only strip the plastic backing from the adhesive as he would from a plastic bandage, and apply it to the surface of the spacecraft.

A hollow stem projecting from the center of the disc would permit insertion of a self-locking handle to which the astronaut would cling.

By attaching a series of these projections, the astronaut could reach any part of the spacecraft, much as a mountain climber using pitons.

Attaching a belt as widow washers use, the astronaut could safely repair meteoroid damage to the skin of the capsule.

A space wrench to overcome weightlessness and a spring hammer have also been developed. Experts say the final solutions to space maintenance problems will be self-contained power tools.

Roundtrip Mars Flybys Set For '70s

Manned roundtrip, non-stop flybys of Mars and Venus by the 1970's are a definite possibility, according to John F. McLaughlin, a senior research engineer with Lockheed.

Speaking at the recent summer meeting of the American Institute of Aeronautics and Astronautics in Los Angeles, McLaughlin said a roundtrip Venus flyby mission appears possible with only one launch of a Saturn V, provided nuclear power is utilized as the final booster stage.

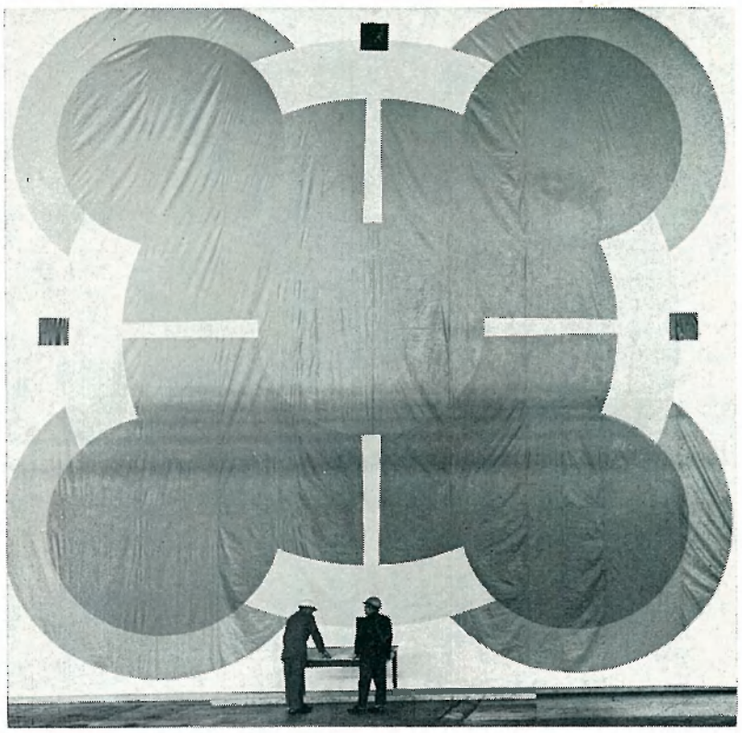
Rendezvous in earth orbit of two Saturn V boosters should virtually guarantee a Venus flyby capability, he added. In addition, this combination should make low energy Mars flybys possible, provided technology — life support systems and reliable space hardware— will permit such a 22-month trip.

McLaughlin pointed out that more analysis of stopover missions is required, before definite conclusions can be presented. However, he said, that even with optimum trip selection, advanced nuclear Earth escape propulsion systems and development of aerodynamic atmospheric entry, initial Earth orbit vehicles of one to three million pounds appear to be essential for interplanetary stopovers.

NASA's RIFT program — nuclear reactor-in-flight test, under the direction of Marshall Space Flight Center — will be the nation's first step toward use of nuclear propulsion in space.

McLaughlin said that it is obvious that other areas of development, in addition to nuclear propulsion, will have a profound effect upon requirements for more advanced missions.

Such developments as life support systems, reliable hardware to allow mission of two or three years' duration, planetary systems utilizing atmospheric braking, and cryogenic handling systems to conserve liquid hydrogen in space — with little loss for hundreds of days — will have tremendous impact upon nuclear orbit launch vehicle design.



TWO ENGINEERS lend scale to a full-size drawing of the Saturn V first stage tail section in the NASA Michoud Operations' manufacturing building. The drawing, used as an engineering aid, depicts an end view of the 33-foot-diameter, 138-foot-long booster. The four, dark outer circles and the one inner circle represent the booster's five 1.5 million-pound-thrust engines. Combined, the engines will generate the equivalent of about 150 million horsepower. The S-IC will be the first of a three-stage vehicle designed to launch Apollo spacecraft on the first manned lunar expedition.

Dear Sir:

"Please send me one of your used space capsules. I want it to play with."

Philip G.
Belle Glade, Fla.

CONTRACT

(Continued from Page 1)

apparent low bid for that work.

The Launch Operations Center this week awarded a contract for more than $1 million to Ingalls Iron Works of Birmingham for the construction of three launcher-umbilical-towers which will accompany the Saturn V/Apollo space vehicles from the VAB to the launch pad.

Space "Spin Offs" Displayed In Chicago

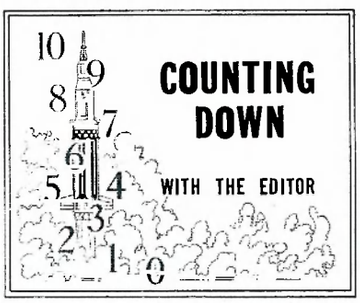
Examples of areas of industrial "spin off" from space research were shown in Chicago by NASA and the Illinois Institute of Technology Research Institute this month.

The first nation-wide display of space research innovations with industrial possibilities was held at the 1963 Chicago International Trade Fair, June 19 to July 7 at McCormick Place.

Demonstrating scores of products and processes ranging from a light ray that carries voice messages to a collapsible metal that affixed to autos might reduce the highway death toll, the operating exhibit is sponsored by NASA's Office of Technology Utilization.

Watercress Capital

Before the space age caught up with Huntsville, Alabama, it was known as the "Watercress Capital of the World."



We ran across a birth announcement idea the other day that was quite novel. We filled in the bold-faced spaces with fictitious facts, but you can adapt it to announce the next arrival in your family, particularly to the folks back home. The announcement, in the form of a mock news release, reads as follows:

BULLETIN

C A P E CANAVERAL, FLORIDA — The **third Doe** satellite, **John Jr.**, was launched into a highly successful orbit here **July 11th,** after several months of preparation.

According to the prime contractors, **Mr. and Mrs. John Doe Sr.,** the **seven-pound, four-ounce** payload achieved escape velocity at **8:21 a.m., E.S.T.** Shortly after launch it was heard transmitting a loud wailing signal. Officials said the clearness and volume of transmission was proof of a highly efficient mission.

(This last paragraph is optional.) The launch was the final test of this series. With three successful orbital launches in as many attempts, the project's reliability has been firmly established. The next few years will be spent tracking the satellites in their rapid movements about the earth.

* * *

If you're five feet 10 inches tall, weigh 160 pounds and are 35 years old, you're in pretty select company. These figures add up to the "average" astronaut.

In addition to the physical facts, average flight time logged in conventional aircraft by the U.S. spacemen is 1,200 hours, and more than 1,800 hours in jets.

These statistical tidbits are in a new NASA brochure, "Manned Space Flight Team." The booklet, which includes photos and profiles of the astronauts, may be obtained from the U.S. Government Printing Office in Washington for 15 cents.