SPACEPORT NEWS

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Whirlwind Visit

PRESIDENT IMPRESSED WITH SPACEPORT

President John F. Kennedy left Cape Canaveral obviously impressed following his swift-paced, two hour and 20 minute spaceport visit Saturday.

Kennedy's giant 707 jet landed on Canaveral's skid strip at 10:10 a.m., ten minutes late, and he was greeted by NASA Administrator James E. Webb, LOC Director Dr. Kurt H. Debus, Major General L. I. Davis, Commander of the Air Force Missile Test Center, and others.

The President, wearing a blue suit and holding a gray fedora, stepped into a long white Lincoln Continental convertible and departed immediately for Launch Complex 37, waving to Cape employees enroute.

He was briefed on Gemini operations in front of 37's blockhouse by George M. Low, Deputy Associate Administrator for Manned Space Flight, and astronauts Gus Grissom and Gordon Cooper.

After shaking hands with several employees at 37, the President and his party, which included Florida Senator George Smathers, stepped into the blockhouse for a briefing on the manned lunar landing program by Dr. George Mueller, Associate Administrator for Manned Space Flight.

From there, Kennedy went directly to 37's pad B, where Saturn SA-5 is undergoing checkout tests for its flight, scheduled before the end of the year.

Marshall Space Flight Center Director Dr. Wernher von Braun briefed the President on the Saturn program, and then Kennedy walked under the 163-foot-tall vehicle for a close look at its powerful engines.

He asked Dr. von Braun how the Saturn compared to Russia's largest boosters, and was told that with the launch of SA5 the U.S would have the greatest known booster capability in the world.

Kennedy then asked if such space-oriented vehicles as the Saturn had any military possibilities, and Dr. von Braun answered that by establishing a strong basic capability in space through such vehicles, the U.S. is building a meaningful overall space program that would be both beneficial for peaceful exploration or, if

(See PRESIDENT, Page 8)

THE PRESIDENT, Senator Smathers and NASA Administrator James E. Webb were photographed in a Mt. Rushmore-type pose during SA-5 briefing. For photo story of JFK's visit, turn to Pages 4 - 5.

Hourly Rate Increase Set For Wage Boarders

NASA has announced a new schedule of hourly rates for craft, trades, and laboring employees in the Cape Canaveral area.

Increases for non-supervisory personnel at Step 2 will range from 9c per hour to 12c depending upon grade.

Personnel paid under Leader and Supervisory schedules will receive proportional increases. These revised hourly wage rates will become effective with the first full shift on or after December 8.

All NASA Wage Board personnel in this locality will benefit from this revised hourly wage rate schedule.

The Inside Story

See page 8

NASA Clears United Fund By Comfortable $1,750 Edge

NASA employees topped their United Funds goal of $15,000 by a healthy $1,750.

Community Development Officer Paul Siebeneichen, who served as Campaign Chairman for the six-week drive, said, "The employees' participation was extremely generous, and on behalf of the LOC Director I'd like to extend appreciation to all those who so willingly aided the campaign."

Statistically, about 80 per cent of NASA's workforce contributed an average of $10 each.

Of the 34 elements and offices involved, 23 had 100 per cent participation by employees.

Brown Engineering contributed the largest individual amount, $3,396, or better than $20 per employee.

Only three groups, LVO, Management Services and Economy Blueprint, had less than 50 per cent participation.

The total figure collected, $16,750, far exceeded the $10,000 NASA employees contributed to last year's Campaign.

The overall Brevard County United Fund went over its $307,500 goal this year.

SPOTLIGHT

"Well Done, Everybody"

TO ALL NASA PERSONNEL:

President Kennedy's visit to our NASA activities on November 16 was again a memorable occasion for us.

Arrangements were planned in such detail to meet every contingency that the tight schedule of the visit was well executed and all necessary last minute changes were accomplished.

This could not have been possible had it not been for the many who worked so tirelessly during the planning, preparation and operation.

It would be impossible to recognize each and every individual contribution. Therefore I would like to extend my compliments and my appreciation to all for providing the President with a concise briefing of the NASA program at the Cape and MILA.

Well done, everybody!

Dr. Kurt H. Debus

PASS THE CORN

There's something about seeing a President in person that can't quite be described in words.

When he stepped from his plane Saturday and the Air Force band began playing the traditional "Hail to the Chief," it somehow gave a touch of magic to the occasion.

The magnetic personality that can be generated only by a President was mirrored in the faces of the employees who lined his Canaveral route to wave as he went by.

Perhaps it was best summed up by a delighted young lady, who had just shaken hands with Kennedy at Complex 37.

"This may sound corny," she said, "but I was so thrilled to meet him, it really gives you a sense of pride in your country."

If that's corn, we'll have some.

HUNT SAFELY

Last Saturday marked the opening of the hunting season in Florida.

Let's hope the final tally won't include any humans—results of unfortunate hunting accidents.

Each year there is a photo in the papers of a man painting COW in large white letters, on Bossie, so anxious hunters won't mistake it for another animal.

On the surface such photos appear humorous, but there are serious overtones to them. There are far too many careless incidents during the season—shooting at a rustling bush, climbing through a fence with a loaded shotgun, etc.

So when you pack up your gear for that long-awaited trip into the back country, think safety.

SPACEPORT NEWS

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

A 1/10 SCALE MODEL of the Centaur launch vehicle is inspected by a NASA engineer at the Lewis Research Center. The second launch of a NASA-Centaur from Cape Canaveral is scheduled for next Tuesday.

Civil Service Legislation To Congress For Action

Status, as of mid-October, of major Federal personnel legislation on which some or completed action has been taken by Congress:

HEALTH BENEFITS. Senate bill amends the Federal Employees Health Benefits Act of 1959 to remove certain inequities. The bill permits enrolled employees to continue their coverage when placed on employees' compensation even though the injury giving rise to compensation benefits occurred prior to enactment of the Health Benefits Act.

It also provides that employees who enroll up through December 31, 1963, who otherwise might be ineligible to do so because they did not enroll at the first opportunity, may continue their coverage after retirement.

Hearings completed in Senate; ordered reported to Senate Post Office and Civil Service Committee by Health Benefits and Life Insurance Subcommittee. Hearings completed by House Post Office and Civil Service Committee.

RETIREMENT. Senate bill amends the Civil Service Retirement Act to provide for optional retirement on full annuity at age 55 after 30 years' service.

Hearings completed in Senate; pending before Retirement Subcommittee, Senate Post Office and Civil Service Committee. Hearings completed in House on related bills; pending before Legislative Subcommittee, House Post Office and Civil Service Committee.

SPACE ALMANAC

A CHRONOLOGY OF EVENTS IN SPACE EXPLORATION AND RESEARCH.

3 Years Ago?

November 22—India and U.S. announced joint program of some 40 high-altitude balloon flights from India, starting in December.

November 23—X-15 (No. 2) flown on second test flight with XLR-99 engine by Scott Crossfield, restarting the engine in flight for the first time.

1 Year Ago

November 25—Mariner II Venus probe established new communications record, transmitting "excellent quality" data from more than 22.5 million miles in space.

Atom Battery May Power Spacecraft

An atomic battery that could power a spacecraft to Mars in only 30 days has been under intensive analytical study at NASA's Lewis Research Center.

This battery concept is designed to convert nuclear energy directly into electrical energy. The natural fission or splitting up process of radioactive isotopes releases an extraordinary amount of heat energy. The atomic battery will capture these energetic particles and use them to generate electric power in space.

A Million Volts

William R. Mickelsen's Electrostatis Propulsion Group at Lewis explains that voltages as high as one million volts can be built up using two long metal foil cylinders, one enclosing the other.

The inner cylinder would be coated with a radioactive isotope, probably cerium 144, that gives off negatively charged beta particles as it decays.

As they are thrown off in fission, these negative betas rush toward the outside cylinder leaving a positive charge behind them. Thus, an electrical circuit could use the two cylinders with opposite charges much like it uses the oppositely charged terminals in a car battery.

Rocket-Launched

Although there are many problems yet to be studied—protective shielding from the radioactive battery, lightweight power conversion equipment and packaging the isotope during launch—Mickelson's group has a preliminary design for a Mars ship that could use this battery concept.

They envision it as a small, two-ton ship with a battery producing 500 kilowatts.

Describing a possible Mars flight, Mickelsen said the spacecraft would be launched into Earth orbit by a more conventional chemical rocket. From these it would spiral away from the Earth's gravity until it could be caught up in the gravitational attraction of Mars. Then it would spiral into an orbit about Mars.

A FEW weeks ago Spaceport News ran two pages of photos with comic captions, and the response was such that we decided to add another—with one switch. This time we want YOU to write the caption to fit what astronaut Neil Armstrong might be saying as he is hoisted from the water during a survival training course. Submit your entries to LO-GT45, and we'll publish a few of the best.

Information from TIROS, the weather satellite, enabled weathermen to forecast the break of a 45-day heat wave in Australia.

'Hare Raising' Experiences Important For Research

Raising rabbits or hamsters is a hobby for some teenagers, but they are important tools in some of the advanced reseach being done these days by science-minded high school students.

The depth of youth's laboratory experiments was indicated in reports made by school-age scientists at the recent Youth Science Congress at NASA's Goddard Space Flight Center.

Among the reports was "The Growth of Human Cancer Tissue in Hamsters" by Catherine T. Consalvi of Drexel Hill, Pa.

Used in her experiment was an actual breast cancer, obtained from Delaware County Memorial Hospital and transplanted to a hamster.

A younger student, Anne Lawton of Horsham, Pa., reported on "The Effects of Protein on Rabbit Growth" from dietetic studies she made on 19 of her own rabbits.

The report by Boyer Westover of Johnstown, Pa., entitled "Investigations of Some Pharmological Action in Scorpion Venoms," summarized his work with more than 250 white rats, mice, cats, and rabbits.

Open House Weekend

In recognition of Mental Retardation Week, the director and staff of the Brevard Training Center will hold an "open house" program Friday from 12 till 5 p.m., and Saturday and Sunday from 2 to 5 p.m.

All parties interested in seeing the facilities available in Brevard County for the training of retarded children are invited to attend.

Persons attending tomorrow will be given an opportunity to "look in" at the various classes.

The Training Center is located at 1900 Cedar Avenue, Rockledge.

Miraglia Appointed

John P. Miraglia, formerly with the National Labor Relations Board, has been appointed Chief of Industrial Relations for the Launch Operations Center.

Miraglia comes to LOC from NASA's Michoud operations in New Orleans. Prior to that he was with the Launch Operations Directorate at Canaveral.

MARINER II CAUSED COLLEGIATE CHANGES

When Mariner II flew by Venus 11 months ago it changed the educational atmosphere on Earth.

College students who formerly shunned the study of planets now are signing up in greater numbers.

The astronomical community has long been lukewarm toward the study of the planets. Astrophysical and other problems in astronomy together with techniques available for tackling them, were held to be more important and offering greater promise.

In fact, planetary astronomy was viewed with such academic scorn that a young student jeopardized his career merely by mentioning an interest in it, says Dr. Homer E. Newell, NASA's Associated Administrator for Space Sciences and Applications.

Now the atmosphere is changing.

With Mariner II symbolizing new opportunity to acquire hitherto unobtainable data on the planets, those few who have been working in planetary astronomy are acquiring "status" and newcomers are entering the field.

Dear Sir:

I would like to go to the moon with you. I am not afraid, but, if possible, I would like to come back too.

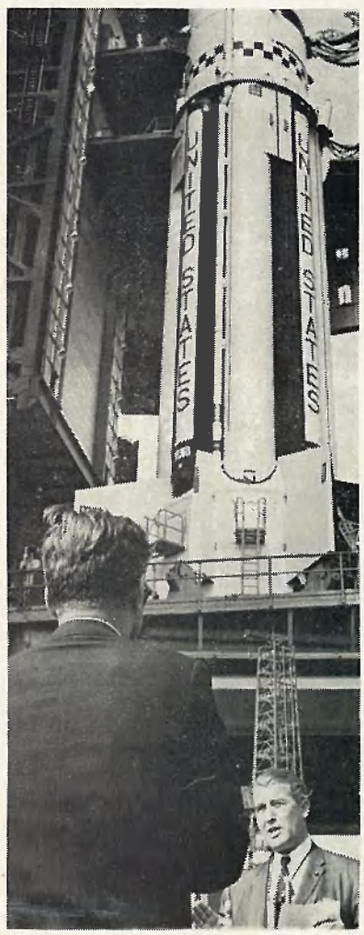
Lisbon, Conn.
Bundy H.

PHOTOS TELL TOUR STORY — FROM TOU

ARRIVING 10 minutes late, Kennedy, followed here by Florida Senator George Smathers, maintained a brisk pace.

PRESIDENT KENNEDY was greeted on his third visit to Canaveral by Major General L. I. Davis, Commander of the Air Force Missile Test Center, and LOC Director, Dr. Kurt H. Debus, right.

NASA ASSOCIATE ADMI dent Kennedy on manne Administrator, and LOC D

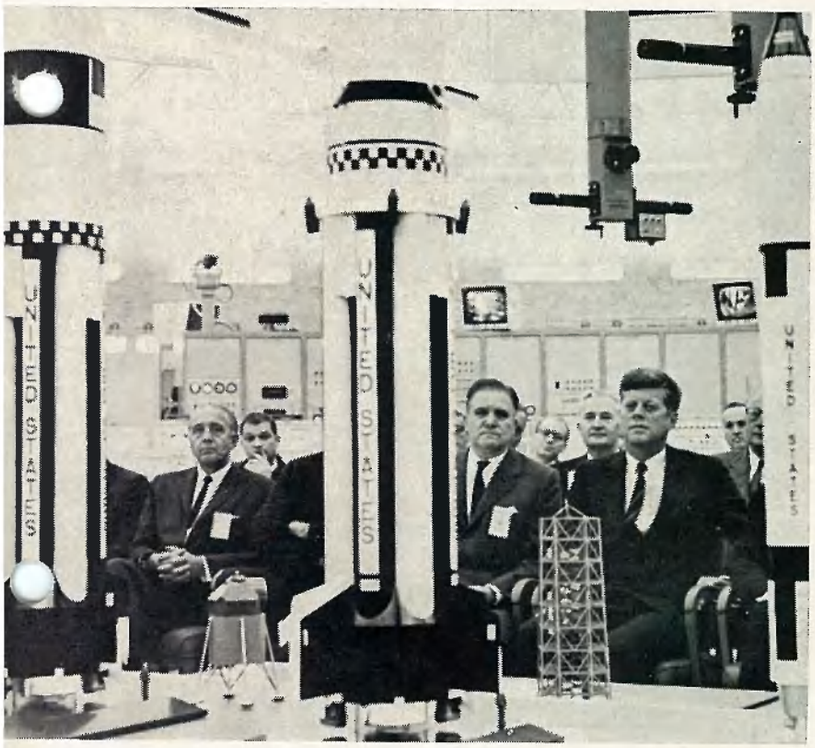


DR. WERNHER von Braun, Director of the Marshall Space Flight Center, briefs the President on SA-5's status.

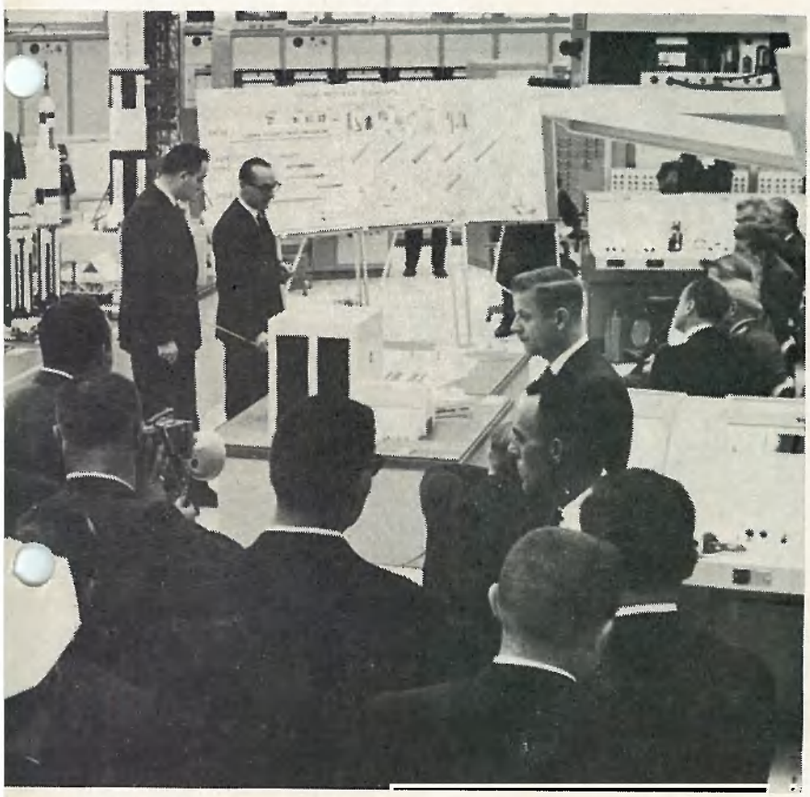
THE PRESIDENT donned tourist-type dark glasses to cut down on the bright glare from the Florida sun.

WHITE HOUSE correspondents and local newsmen crowded elbow to elbo Dr. George Mueller gave the briefing, assisted by LOC's Rocco Petrone

'HDOWN TO TAKEOFF



ɔTRATOR for Manned Space Flight, Dr. George Mueller, left, briefs Presi-ınar landing plans. To the President's right are James E. Webb, NASA ːtor, Dr. Kurt H. Debus.



o hear the manned lunar landing briefing in Complex 37's blockhouse. ɛnter.

BAND MEMBERS take a brief break a few minutes before the President's arrival. As he deplaned, the Air Force band played the traditional "Hail to the Chief."

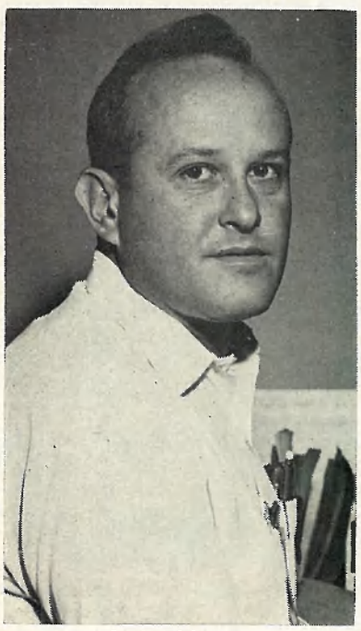
THIS BANDSMAN gave the resident a brassy welcome and farewell.

KENNEDY helicoptered over the Merritt Island Launch Area and was briefed by LOC Director, Dr. Kurt H. Debus.

KENNEDY ASKS Dr. Wernher von Braun a question concerning the SA-5 vehicle, toward which he is pointing. At right is NASA Associate Administrator Dr. Robert C. Seamans.

Julie Stevens

Lloyd Bell



Jack Phlieger

CAPESIDE INQUIRER QUERIES EMPLOYEES ON 'BEST ADVICE'

Only when a man is safely ensconced under six feet of earth, Edward Newton once said, is he in a position to give advice with any certainty, and then he is silent.

The Capeside Inquirer found that many Cape people don't concur with Mr. Newton; that they, in fact, had somewhere in life received valuable pointers.

Here are some of their answers to the question, "What is the best piece of advice you've ever received?"

Julie Stevens, Material Support: "Put as much into life as you expect, or want, to get out of it. I have tried to live up to this."

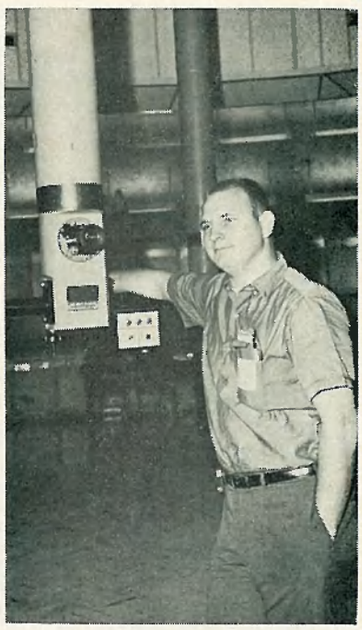
Lloyd Bell, Security Police: "The advice I've always remembered came from my grandfather. He told me that as long as I did what I thought was morally and spiritually right, I would never go wrong."

Jack Phlieger, Management Services: "While stationed at Patrick AFB in 1954, my Civilian superior advised that if I decided to work in the missile field to go to Redstone Arsenal. I did, and this has resulted in a very interesting and rewarding 10 years in the field."

Gene Rawls, Oxidizer Section: "The best advice I ever received was to do business with your friends. By so doing, not only do you support them, but you strengthen the friendships as well."

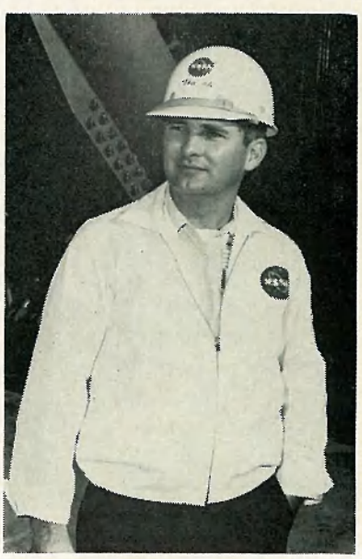
Caroll Collins, Director's Office: "Justice is the only worship, love is the only priest, ignorance is the only slavery, happiness is the only good. The time to be happy is now, the place to be happy is here, the way to be happy is to make others happy."

Tommy Marsh, Vehicle Mechanical Propulsion: "My dad told me to get a college education in order to make the world my oyster. I'm glad I took his advice."



Cary Rawls

Caroll Collins



Tommy Marsh

Rocket Fuel To Eliminate Headaches

A magnetic rocket fuel invented by a scientist at NASA's Lewis Research Center may eliminate a lot of headaches for rocket designers.

A rocket vehicle in parking orbit about the earth or coasting through space is weightless. The liquid fuel in its half-empty tanks floats about in disorganized bubbles. When it is time to re-start the engines, the fuel must be collected near the pumps.

According to S. Stephen Papell, the inventor of the magnetic fuel, this problem can be resolved with magnetic propellants.

He proposes that an electromagnet located in the pump area of the fuel tank be turned on just before the rocket's engines are re-started. The propellant, which is made magnetic by mixing it with very tiny particles of magnetic iron oxide, will be attracted by the magnet. Thus, when the engines are re-started, there will be sufficient fuel near the pumps to guarantee a fast re-start.

Some remaining unanswered questions are: can cryogenic, cold propellants such as liquid oxygen and liquid hydrogen be made magnetic? What happens when a magnetic fuel burns in the rocket's combustion chamber? Will the magnetic particles reduce the propellant's ability to produce power? Does it erode the chamber? Will the magnetic particles collect in the chamber?

Another suggested use for magnetic fuels is to allow weightless studies in the earth's gravity. In the past it has been necessary to simulate weightlessness in drop towers or aircraft flying ballistic trajectories. Such brief times are too short for complex studies.

One thing rocket designers would like to be certain of is exactly how liquids boil and transfer heat in weightlessness. Papell suggests that his magnetic fluids could be studied for long times in simulated weightlessness and provide much heat transfer data.

Visibility Information Evaluated

How much visibility does a pilot require to fly an aircraft through all phases of flight, including take-off, navigation, and landing?

Engineers and pilots at NASA's Flight Research Center at Edwards, California, have completed the first phase of a program designed to obtain this information that may aid in the design of future vehicles.

Present aircraft visibility requirements demand a large amount of glassed area for pilot visibility. However, this same amount of glassed area on future vehicles that are capable of orbital flight and atmospheric reentry would impose serious heat shielding and weight problems on the vehicles.

To evaluate the pilot visibility requirements, NASA engineers configured a light two-place aircraft, an L-19, with two wide angle monocular telescopes.

The optical system, originally developed for possible use in armored vehicles by the Army, consists of two wide-angle, unity power monocular telescopes mounted with their axis convergent to an angle of 55 degrees toward the pilot.

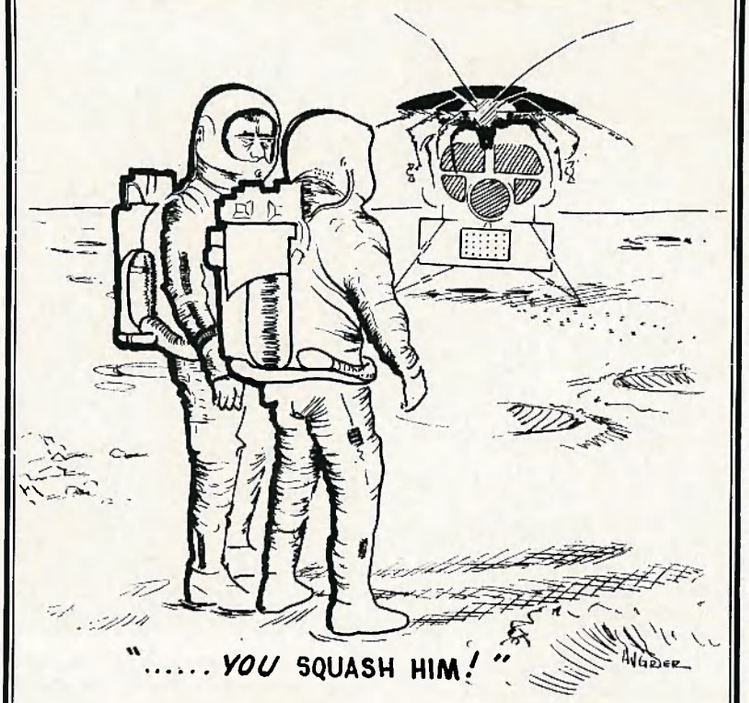
The two telescopes only exposed four square inches of glass area and still afforded the pilot a 140 degree visual field horizontally and 90 degrees vertically.

About 40 flights were made with the aircraft using the optical system. Take-offs, in-flight navigation and maneuvering, and landings were accomplished during these flights by the evaluation pilot using the optical system as his source of visibility.

Based on the results of the first phase of the program, plans have been made to configure a high speed jet aircraft with a similar optical system for evaluation.

Apollo Reentry

The Apollo lunar spacecraft when reentering the Earth's atmosphere will be traveling at a rate of 37,000 feet per second.



FLYING COCKROACHES NEXT IN SPACE

Cockroaches—you just can't get away from them!

And now, they may be going into space if Washington entomologist William Sullivan can sell authorities on his idea.

Sullivan, who has been experimenting with the insects since 1959, says the cockroach is one of the toughest of all animals, having been around without change for millions of years.

Thus, he feels, if the rhythm in a roach should change radically or cease in space, it would indicate that the human astronaut, who is basically frailer, might be in plenty of trouble.

Sullivan has already conducted some high-altitude tests. He taped some roaches to the side of jet fighters to find out if the insects could survive low temperatures, pressure and humidity. Although most of them didn't survive, those left in canvas bags in bomb bays lived comfortably. He has also sent roaches up in balloons to various heights for study.

He is now building a three-pound "biopack"—the cockroach version of a space couch. A dozen to 20 roaches, with wires hooked to their tiny legs, would share the biopack in an experiment aimed at examining how space will affect the roaches.

An astronaut sharing his capsule with such a cargo wouldn't have to worry about any spilled crumbs.

GODDARD DICKERS FOR AOSO CONTRACT

The Goddard Space Flight Center has begun negotiations with the Republic Aviation Corporation for development of the Advanced Orbiting Solar Observatory, (AOSO).

The total Phase I development costs, when all negotiations are completed, is expected to total some $5 million.

Phase I of AOSO development calls for a one-year period to determine systems engineering criteria and detailed design of the satellite. A breadboard model of the control and data handling systems and development of an engineering model of the AOSO's sun sensor are also included in this Phase.

Current planning calls for launching AOSO into a near polar orbit.

More Key Positions Filled At Marshall

Additional key positions have been filled at the Marshall Flight Center. The appointments resulted from a major reorganization of the Center which was announced in September and became fully effective last month.

Practically all the key positions in the new organizations have now been filled. Following are recent appointments:

Garland G. Buchner has been named chief of the Purchasing Office, while the Facilities and Design Office is headed by G. W. Dykes. Another new office at that level, Personnel, has as acting chief Arthur Sanderson.

In Research and Development Operations, two new office chiefs have been named: Konrad K. Dannenberg heads the Systems Office (with Dr. J. P. Kuettner as his deputy), and Winfred F. McCartney is chief of the Resources Management Office.

In Industrial Operations, the following appointments have been made: James W. Barnett, chief, Facilities Project Office; and John C. Goodrum, chief, Projects Logistics Office.

MARGARET K. MAGURA of LOC's Financial Management Office has been commended for an outstanding Performance Appraisal from January 1962 to January 1963, by the Commanding Officer at Camp A. P. Hill, Virginia.

A Whole Lot Of Volts

More than 247 million kilowatt hours of electricity were generated last year at Canaveral, according to Florida Power and Light Company figures. Officials expect this number to triple by 1967.

President

(Continued from Page 1)

necessary, military applications.

Kennedy then boarded a Marine helicopter with Dr. Debus for an inspection of the Merritt Island Launch Area.

"He was very much impressed with what he saw," Dr. Debus said, "and he asked many technical questions."

Following the overfly, the President boarded the U.S. Observation Island off the Canaveral coastline to view a successful Polaris launching from the nuclear submarine Andrew Jackson.

He then helicoptered back to the skid strip and told Dr. Debus before departing: "I have found this visit most informative. It has been a great help to me and will aid me in assessing our space programs.."

It was the President's third visit to Canaveral within the past 21 months. He was here in February and September of 1962.

Webb, Deputy Administrator Dr. Hugh L. Dryden and Associate Administrator Dr. Robert C. Seamans all stayed at the Cape for a more thorough tour of NASA facilities Saturday afternoon.

"I'll probably be here until dark," Webb said. "I want to take advantage of this opportunity."

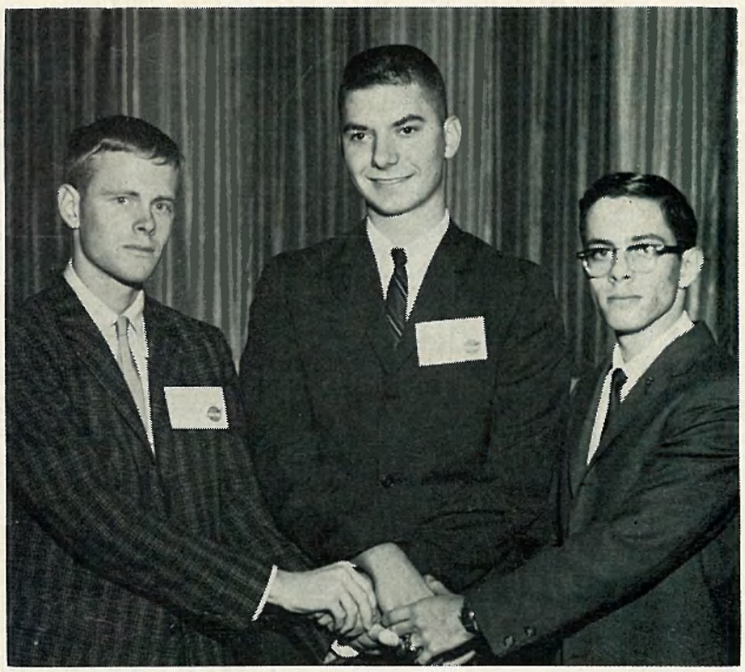
His itinerary began with a briefing on the Centaur at Complex 36. He then went back to 37 for a close-up look at the Saturn. Webb was also briefed on unmanned space projects at Hangar AE, and then inspected NASA's Interplanetary Monitoring Platform (IMP) which is to be launched next Tuesday.

He later toured the Mission Control Center and climbed to the top of Delta Pad 17 for a briefing. True to his word, his tour ended at dusk.

NOISY PLANET

According to FSU physicist Colin Barrow, the planet Jupiter emits strange outbursts of noise.

Barrow, who is studying the planet under a $75,000 NASA grant, cannot fully explain them, although he believes they are related to solar flare activity.



WINNERS of the NASA-National Science Teachers Association Youth Congress held at the Cape earlier this month were, from left, Robert A. Thomson and Charles G. Taylor Jr., both in the field of biological sciences, and Sherryl De Stephano, physical sciences.

APOLLO SPACECRAFT STUDY PACT GIVEN

The Space and Information Systems Division of North American Aviation, Inc., Downey, California, has been awarded a $100,000 contract by the NASA Manned Spacecraft Center to study modifications to the Apollo spacecraft that will permit it to perform as a space sciences laboratory for missions up to a year.

The modifications, for which the study contract has been let, will adapt the spacecraft for long earth orbital missions.

North American has been asked to supply MSC with studies covering both a single spacecraft on a 100-day mission and three or four spacecraft uses consecutively on a one year mission.

The major objectives of the flights will be to determine man's requirements for protracted space missions. This will require continuous evaluation of his physiological condition and capabilities to work in space under the zero gravity environment and under artifical "g" force—if it can be provided.

MSC has asked that the modified Apollo Command module be capable of performing an abort mission for safe recovery of the crew; be capable of landing either on land or in the water; offer maximum crew protection against radiation and meteoriod hazard and provide a safe and comfortable space environment for the crew for the entire mission.

Size of the crew also to be determined during this study.

The contractor must look into the possibility of providing an artificial gravity system and he will study rendezvous and docking methods using two modified Apollo spacecraft.

NASA NEWCOMERS

New employees who have joined NASA/AMR recently:

John A. Buckley, Charles V. Horne, Ralph S. Lotspeich, Cleve O. Loveland, Alexander S. Lyman, Howard Nichols, Joseph A. Reginaldi and George W. Stead.

Launch Support Equipment Engineering Division, Huntsville: Leonard F. Allen, III, and James M. Stanley.

Kathleen Carter, Harlen Hatfield, Marjorie Huber, William Mahoney, and Emmitt Reynolds, Rodney Avery, Bari Bryant, John Dickinson, Ralph Dorn, Lola Cchaefer, and Bazine Taylor.

Looking for a sure-fire way to stop smoking?

Chuck Hollinshead and Harry Handley of LOC's presentations section have come up with an unusual proposal that is virtually guaranteed to stamp out their nicotine habit or break them financially.

Each put up a $20 bill with this agreement: Should either light up anytime before November 13, 1964, he will forfeit the $20 to the other, and will have to pay a **$1 fine for each cigarette** he smokes thereafter!

Both were in the pack-a-day class as smokers.

* * *

Spaceport News photographer Russ Hopkins, who loves to take animal pictures in his spare time, is a little more cautious about camera angles these days.

Seems he had talked a Tampa zoo keeper into letting him inside a half-grown lion's cage the other day. Hoppy crept up to about three feet away from the cat and began snapping the shutter.

Suddenly the lion raised up an authoritative paw and took a healthy swipe at Hopkin's camera.

What happened then? "I left," he said, "and put a long focal length lens on my camera to finish shooting from the other side of the bars."