SPACEPORT NEWS

Volume 2, Number 5 | NASA Launch Operations Center, Cape Canaveral, Florida | January 31, 1963

LOG, LVOD PERSONNEL CHANGE WORK HOURS BEGINNING MONDAY

LOC and LVOD personnel will report for work a half-hour earlier beginning Monday.

New working hours of 7:30 a.m. to 4 p.m. have been established to avoid changing work schedules periodically during the year.

C. C. Parker, deputy LOC director for administration and services, said the new schedule "is one we can live with the year around."

The new work hours are a "compromise", Parker said, between earlier hours of 7 a.m. and the present schedule beginning at 8 a.m.

Parker said a traffic survey was taken during the period LOC and LVOD personnel will be en route to work under the new schedule. "It showed," he said, "the traffic situation will be a little better for the people coming to the Cape from the south end of the county."

Congressman Sponsors Bill On Annual Leave

U.S. Representative T. A. Thompson, (D.-La.), has sponsored a bill to give Federal employees the right to use annual leave they otherwise would lose each year because of heavy workloads and other reasons.

The present law requires government workers to use all annual leave above 30 days or lose the unused portion.

Thompson's bill would allow employees to carry over their unused annual leave for two years in cases where the agency certified employees were prevented from using it.

If the employees still weren't able to use the annual leave, they would be reimbursed in cash for the unused portion.

DIGGING IN at ground-breaking ceremonies Monday for the new Manned Spacecraft Operations and Checkout Building on Merritt Island were these NASA and military officials. Left to right are Walter C. Williams, MSC Associate Director; G. Merritt Preston, Director of MSC Pre-flight Operations; Dr. Kurt Debus, LOC Director; D. Brainerd Holmes, Director, Office of Manned Spaceflight; Dr. Wernher von Braun, Director, Marshall Space Flight Center; Col. H. R. Parfitt, U. S. Army District Engineer; and Col. E. Richardson, Air Force Missile Test Center representative.

OFFICIALS HAVE BUSY WEEK HERE

Top management officials of NASA's Manned Spaceflight Program, broke ground on Merritt Island Monday for a multi-million dollar Operations and Checkout Building, and met Tuesday at Canaveral for their monthly management council meeting.

Representatives from the Office of Manned Spaceflight in Washington, the Manned Spacecraft Center in Houston, the Marshall Spaceflight Center in Huntsville and the Launch Operations Center helicoptered from the Cape to Merritt Island for the shovel-turning ceremonies.

The Operations and Checkout Building will be the first in a vast complex of 40 structures to be built in the new industrial area.

A $7,691,624 construction contract for the building has been awarded to Morrison-Knudson and Paul Hardeman, Inc.

Designed by the Burns and Roe engineering and construction firm of New York, the O and C building will contain nearly 350,000 square feet of space, providing work areas for some 1,800 employees.

It will include an engineering and administration area, a mission and briefing room, a cafeteria, laboratories and control rooms, a high bay and low-bay assembly area, and will be used for MSC's preflight test operations of Project Gemini and Apollo spacecraft.

The monthly management council meeting, headed by D. Brainerd Holmes, Director of the Office of Manned Spaceflight, was held here for the first time Tuesday.

Attending were Holmes, William E. Willy, George M. Low, Charles H. Roadman, Milton W. Rosen, Joseph F. Shea and James E. Sloan, all of the Office of Manned Spaceflight; Dr. Robert R. Gilruth and Walter C. Williams, Manned Spacecraft Center; Dr. Wernher von Braun and Eberhard Reese, Marshall Space Flight Center; Clyde Bothner, NASA Headquarters and LOC Director, Dr. Kurt H. Debus, who hosted the meeting.

Florida Skies Scanned By Tiros Satellites

Two reliable spacecraft, weather satellites Tiros V and VI, focused their wide angle cameras this week on cloud covers over Florida.

The two, launched June 19 and December 18, 1962, respectively, began their state coverage Saturday, after orbiting in low northern latitudes.

Information on Tiros' coverage was relayed from Goddard Spaceflight Center to LOC's Public Information Office via a new Western Union Telex exchange — the 100th unit to be installed.

SPOTLIGHT

OUTER SPACE AMBASSADOR

Explorer I, five years old today, was a remarkable feat, yet viewed in man's terms of time and distance, the challenge of space exploration seems almost insurmountable, and Explorer I's penetration puny.

This is particularly true when we consider that it might take an estimated 100,000 years, at the speed of light, to travel to all the stars in the Milky Way. And this is just one of the several billion galaxies within the range of today's telescopes.

Yet, one has only to review the technological accomplishments of mankind in the 20th century — particularly in the past five years — to realize space, regardless of its infinite and possibly limitless dimensions, can and will be conquered.

The milestones passed since Explorer I are magnificent, indeed, and provide firm foundations for this conquest. Much has been learned of our planet's atmosphere; the moon has been reached; Venus has been studied at close range; and astronauts have viewed the earth from the fringes of space.

If the pace of accomplishments attained in the past five years is maintained or accelerated over a century — we will surely have a thick and well-documented space log.

Long range plans are already being considered for the first manned interplanetary steps — stations in space and deep probes to the outer reaches of our solar system.

These past five years have been exciting. The next five should be even more so. By that time astronauts will have landed on the moon.

Explorer I started it all. It was America's first ambassador to outer space.

THE SCHOOL BOND ISSUE

Next Tuesday Brevard's registered freeholders will have a chance to vote on a $12 million county school bond issue.

If passed, school officials will use the money to build 700 classrooms by 1966. These classrooms will fill 16 elementary schools, four junior highs and one junior-senior high school.

The county student population is now more than 39,000. It is expected to increase by nearly 6,000 this year and by 20,000 within four years.

The bond issue, if approved will increase taxes by one and a half mills — or $1.50 for each $1,000 of non-exempt property as assessed on the Brevard tax roles.

School officials say without new facilities there won't be adequate room for the children. This would leave them no alternative except to extend double sessions.

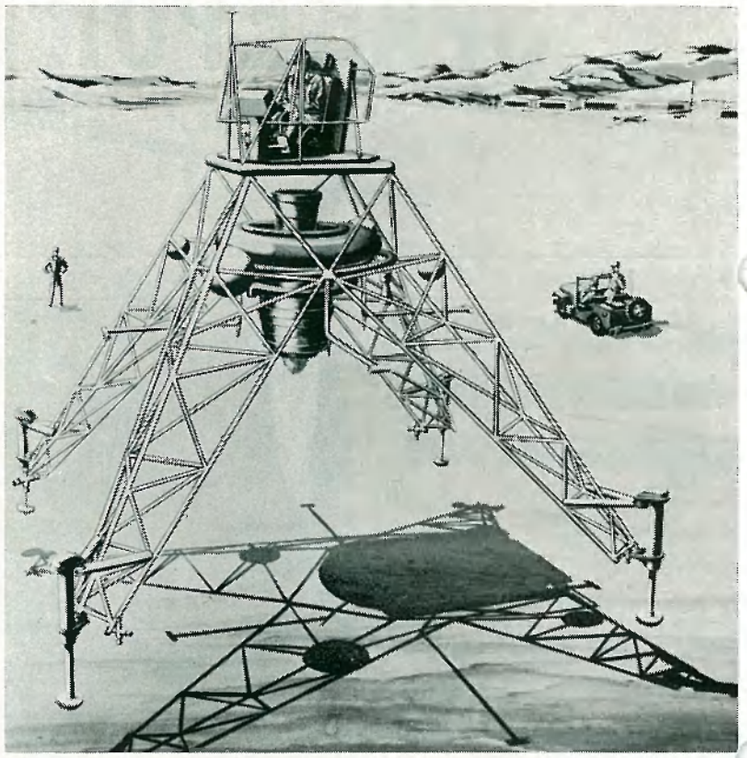
If less than half the voters turn out, the bond issue will automatically fail.

Kennedy Gets Mariner

NASA Administrator James E. Webb and Dr. William H. Pickering, Director of Jet Propulsion Laboratory, have given President Kennedy a small-scale model of Mariner II, for "possible placement in a future Kennedy museum."

SPACEPORT NEWS

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



CREATIVE CONCEPT shows lunar research vehicle setting down for a practice landing. Two of these odd-shaped craft are being built for NASA's Flight Research Center.

Four-legged Research Craft To Practice Lunar Landings

NASA's Flight Research Center, Edwards, California, has awarded a $3,610,632 contract to the Bell Aero-systems Company for the design and construction of two manned lunar landing research vehicles.

The first research vehicle is to be delivered in 14 months and the second within 16 months.

The free-flight test devices, to be used in direct support of Project Apollo, will be capable of taking off and landing under their own power, attaining an altitude of about 4,000 feet, hovering, and horizontal flight.

The program is planned to investigate the problems that may be encountered in landing a manned vehicle on the moon's surface.

The vehicles will carry one man and about 200 pounds of research equipment. They will stand about 20 feet high and will be supported by four legs, equipped with shock-absorbing feet.

Each vehicle will be powered by two separate propulsion systems. A jet engine will be utilized for take off and to compensate for the gravitational force of the earth.

Rocket engines will be used to perform horizontal maneuvers and to decelerate the vehicle as it approaches the ground.

SPACE ALMANAC

A CHRONOLOGY OF EVENTS IN SPACE EXPLORATION AND RESEARCH.

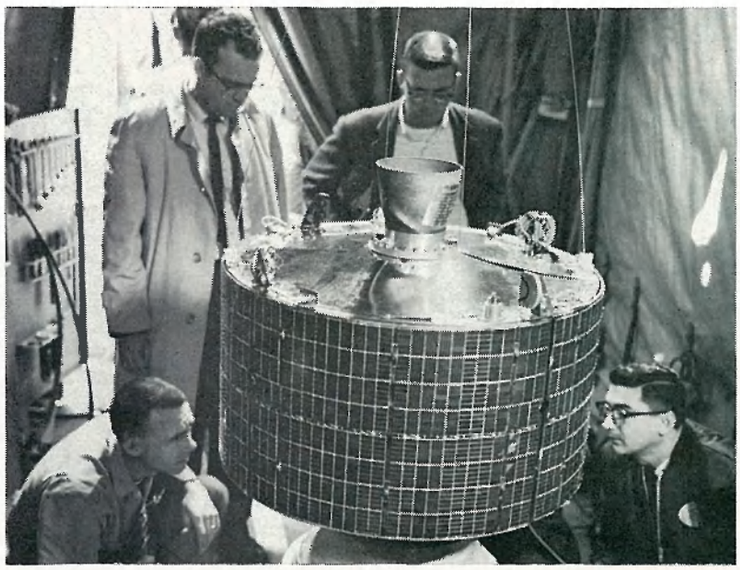
Five Years Ago

Jan. 31, 1958—Explorer I, the first U. S. satellite, was launched from the Cape. See the feature story on page 4.

Feb. 5, 1958—After 57 seconds of flight, the backup of Vanguard TV 3, launched from the Cape, was destroyed.

One Year Ago

Feb. 5, 1962 — A poll of members of the House of Representatives by Aviation Week indicated that five out of six members felt that NASA was the ideal organization to conduct the nation's space programs.



ENGINEERS AND TECHNICIANS inspect Syncom (Synchronous Communications) satellite, which is scheduled for launch in a few days. The 150-pound spacecraft has a close physical resemblance to Tiros.

Syncom Craft Set To Cut Fancy Figure In Earth Orbit

A hatbox-shaped communications satellite — Syncom A-25 — is nestled snugly atop its Delta booster at the Cape today, undergoing final checks before going into space within a few days.

The 150-pound spacecraft is set to slip into a synchronous or "fixed' 'orbit, 22,300 miles above earth, where it will fly figure eight patterns virtually parallel to the equator.

Syncom, to be launched by the Field Projects Branch of NASA's Goddard Spaceflight Center, will take about 24 hours to complete one trip around the world, the same time earth takes one full rotation on its axis.

It will remain fixed, more or less, over one spot on earth, and will appear to a ground observer to be standing still.

Syncom is a step toward reaching one of NASA's major objectives of the decade: to demonstrate the feasibility, provide the technology and learn the application of active artificial earth satellites to global communications.

The spacecraft's specific test objectives are: to develop the capability to place satellites into 24-hour orbits with existing launch vehicles; to flight test a new approach to spacecraft attitude and period control; to test environmental effects on spacecraft components at this altitude; and to develop transportable ground stations which can be readily deployed in useful areas when communications spacecraft are put into operational service.

Cape Canaveral Ball

Freddy Martin and his orchestra will play for the second annual Cape Canaveral Hospital Ball this Saturday at Schrafft's Carriage House in Cocoa Beach.

Dancing will be from 9 to 1 a.m., with tickets at $5 each.

Reservations may be made by calling SU-3-8800.

Space Age "Sore Throat" Developed By Explorer XIV

Explorer IV, after 100 days of almost continuous "talking" and flawless operation in charting space weather, has developed a space age sore throat.

But unlike the Pioneer V and Telstar spacecraft which were repaired in flight by sending them doctored signals, Explorer XIV will have to trust to chance that some event — perhaps a temperature change — might clear up its electronic vocal chords.

The trouble which started three weeks ago, appears to be in the satellite's encoder system, the larynx-like organ of voice.

Exact cause can't be determined because telemetry readings on such important items as voltage, temperature and current will not flow through the encoder system.

Hope Extended

Project Manager Paul G. Marcotte of Goddard reported that solar cells on the 99-pound satellite received less than 10 percent degraduation from man-made and natural radiation since its launch from the Cape last October.

Scientific data has not been analyzed, according to Project Scientist Dr. Frank B. McDonald of Goddard, but NASA hopes to report on preliminary findings by mid-March.

Dr. McDonald said that more than 1,000 miles of data recorded on magnetic tapes by tracking stations should fulfill the major objectives of the satellite.

The spacecraft was launched to help unravel some of the scientific mysteries of how space weather affects man's daily life and his future exploration of space.

Reliability Report Scheduled For SA-3

Representatives from NASA headquarters, Marshall Space Flight Center, LOC and LVOD will meet next Wednesday to hear and discuss a report of Saturn SA-3.

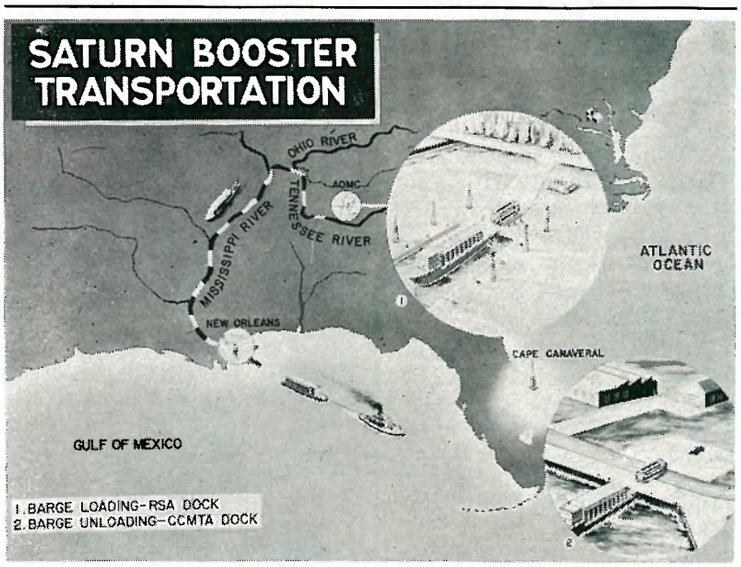
Prepared by the ARINC Research Corp., the report de- and offers recommendations for improvements.

MSFC will be represented by Dr. Benjamin Shratter, reliability coordinator for the Saturn Systems Office.

Marshall's Quality Division, Test Division and Manufacturing and Engineering Division also will be represented.

LVOD Deputy Director Dr. Hans Gruene, and representatives of the Electrical Engineering, Guidance and Control Office, the Electronic Engineering, Measuring and Tracking Office, and the Mechanical, Structural and Propulsion Office will also attend, as will members of LOC's Facilities Office.

The meeting is being coordinated through LOC's Reliability Office.



SATURN SA-4, Scheduled to arrive at Canaveral Saturday, is following this winding route on its 2,200-mile journey from the Marshall Space Flight Center in Huntsville to the Cape. A Saturn S-IV second stage is also due to dock at Canaveral this weekend. It was shipped from the Douglas Aircraft Company's Santa Monica, California, plant.

New Building Opened

A new half-million dollar engineering building has been occupied by the Marshall Space Flight Center's Test Division, the organization that conducts ground tests on space boosters.

The two story structure was built by the E. C. Coston Co. of Birmingham under a $434,000 contract.

Three Division branches, Systems Test, Components Test and Electrical Systems Engineering, occupy the building.

The new building is 40 feet wide and 218 feet long, and provides 17,000 square feet of office space.

EXPLORER I CELEBRATES FIFTH ANNIVERSARY

Historic Flight Opened Spaceways For U. S.; Majority of Original Launch Crew Still Here

At 10:48 p.m. five years ago today history was made when an 18-pound spinning cyclindrical satellite was boosted into space atop a modified Jupiter "C" rocket.

Launched as a part of the United States' contribution to the International Geophysical Year (IGY) scientific research program, Explorer I first opened outer space to the Free World.

The tiny space traveller went right to work and relayed the discovery of the Van Allen radiation belt — perhaps the most significant new finding during the IGY.

Explorer I also confirmed man's ability to control temperature within an artificial satellite, and determined that micrometeorites offer no serious hazard to orbiting vehicles.

Trail Blazer

Still in space, though mute, the trail-blazing spacecraft is today valuable for visual and photographic observations which are used to compute and predict more precise orbital data for other satellites, and analyzed to provide information about the earth's equatorial bulge and variations in earth's gravity.

Explorer I was a joint effort of the Army Ballistic Missile Agency (ABMA), Huntsville, and Jet Propulsion Laboratories, Pasadena, California.

A majority of the members of the original launch team are still at the Cape, now with NASA.

One is Bob Moser, Deputy Chief, Electrical Engineering Guidance and Control Office, who was Test Conductor for the launch.

Moser recalled the flight as being originally scheduled for January 29.

High Winds

On the morning of the 29th, weather observation indicated a maximum jet stream velocity out of the west of 170 mph at altitudes between 36,000 and 40,000 feet.

Scientists predicted only a marginal chance of success.

Surface weather was also unfavorable with thunderstorms forecast. It was feared lightning might detonate sensitive igniters in the vehicles upper stages, so the launch was postponed 24 hours.

But the next day jet stream winds increased to 205 mph., to force a second postponement.

On the following morning, January 31, early observation revealed an unexpected drop in velocity - 157 mph winds at an altitude of 7.8 miles.

The launch was on.

Liftoff

At 10:48 p.m., seconds after the sharp "firing command" rang out in Cape blockhouse 26, the 70-foot giant thundered to life.

It rose vertically for eight seconds, then began to tilt in accordance with the preset instructions fed into its guidance system.

Propelled by 83,000 pounds of thrust, the powered stage of booster flight lasted more than 150 seconds.

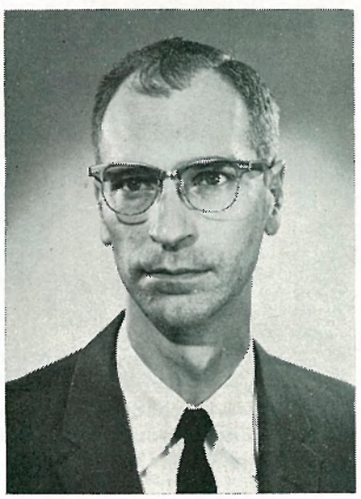
At the precise instant when the assembly reached the trajectory apex, 225 miles above earth, a radio signal flashed from Canaveral triggered the second stage, consisting of 11 scaled - down Sergeant motors.

They burned approximately six and one half seconds, building up the velocity. Then the third stage of three rockets ignited, burning another six and a half seconds, and further increasing the velocity.

As the third stage burned out and fell away, the fourth stage, a scaled-down Sergeant, pushed velocity up up to orbital speed of 18,000 mph.

"Normal Apprehension"

Moser said there was no more than normal apprehension in the blockhouse during the countdown.



Bob Moser

"I would call it a team triumph," Moser said, "but not distinguished from other operations, although we were, of course, aware of Explorer I's special goal.

"Everything went well throughout the countdown. Our first look following liftoff also appeared good. We got word the satellite had made it about an hour and a half later from the JPL in California. The entire crew felt satisfaction when we learned this."

After the news that Explorer I had been successfully injected into orbit was announced, hundreds of wires poured into Canaveral congratulating Launch Director Dr. Kurt H. Debus and his entire team.

Major General John B. Medaris, then Commander General of ABMA, said, "More achievements will be credited as rocketry progresses, but it is doubtful if the joy and relief experienced in America on the night of January 31, 1958, will ever be equaled by a single technological feat."

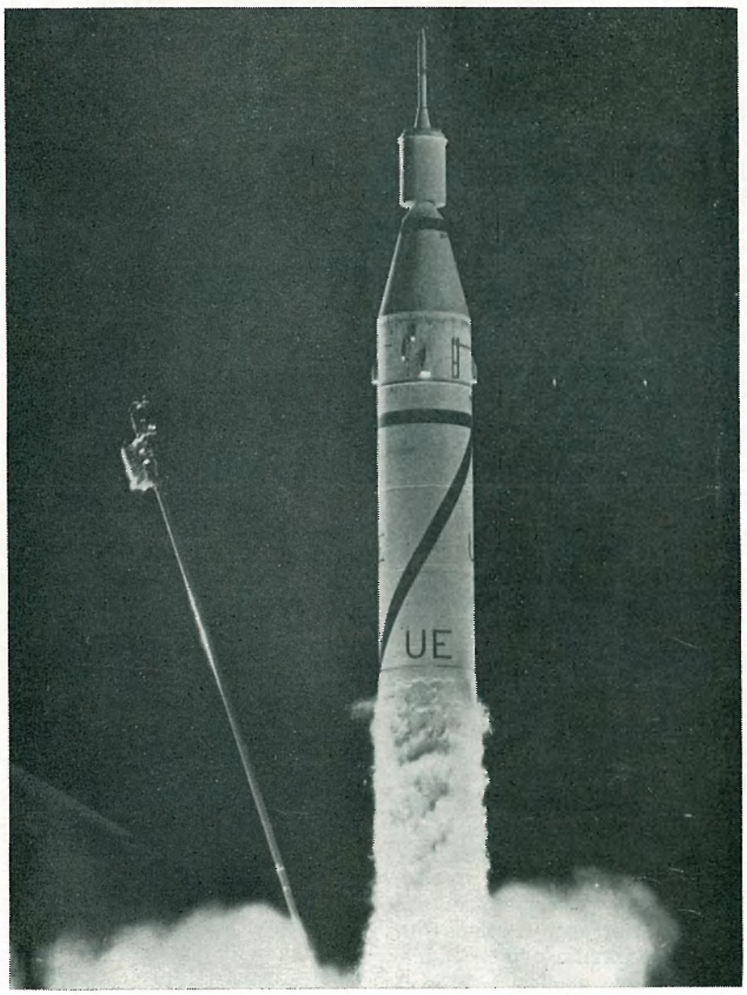
WRINKLED ROCKET

"There is one thing I particularly recall about the booster that hurled Explorer I into orbit," Test Conductor Bob Moser said.

"When it first arrived at the Cape aboard a cargo plane, the propellant tank was partially collapsed, crinkling it up quite a bit.

"This required excessive structural testing before a decision to use it could be made. It was finally decided to go ahead.

"So when the time came, the rocket, crinkles and all, was launched."



Explorer I, 10:48 p.m., January 31, 1958

Accounting's Ray Woodbury Gives NASA Money's Worth

Uncle Sam got a real bargain July 2, 1933, when he hired a tall, rusty-haired young Georgian name Raymond A. Woodbury.

In fact, you would have to look long and hard to find a more dedicated government worker.

Woodbury, Chief of the Financial Management Office's Accounting Branch, hasn't missed a day of work since 1939!

He has accrued 1,864 sick leave hours — high for the Launch Operations Center.

"I don't know of any formula for it," Woodbury said. "I like to give others credit for my well being.

"I've always had a good group of people to work with and my wife, Maida, has provided me a happy home for 25 years.

Raymond A. Woodbury

"I can honestly say that I haven't seen a day yet that I I didn't feel like going to work. I've never had to drive myself. I just get up, eat a good breakfast, and I'm ready to go.

"Actually, I look upon sick leave as a protection for myself and my family. I suppose my accrued time, plus my annual leave time would add up to more than a year.

"But I hope I never use it, not even a day of it. I'd like nothing better than to give it all back to Uncle Sam on the day I retire.

"Now don't get me wrong. I'm not planning or retiring just yet. I'd like to work a good many more years."

Woodbury, 50, at just over six feet and 200 pounds, is, literally, the picture of health.

Southern Drawl

An Atlanta native, he speaks with a soft southern drawl. He came to LOC in August, 1961, after six years with the Ordnance Corps in Anniston, Alabama. He was at Fort McPherson, Georgia, from 1933 - 1955.

He and his wife have three children. Raymond Jr., 19, a Brevard Junior College student, is a summer NASA employee. Roger, 15, is a promising six-foot-five-inch basketball prospect at Cocoa High School, and Ann is 10.

Woodbury doesn't look upon his record of attendance as anything particularly noteworthy, but he is aware and appreciative of the good health he enjoys.

"I don't think freedom from sickness is something we have control over. We can't turn it off and on.

"I just try to give my job its proper place on my list of priorities and everything else takes care of itself."

Uncle Sam would agree.

MANNED LUNAR TRIP TO COST $100 EACH

It will cost every man, woman and child in America about $100 to put a man on the moon.

Dr. Hugh L. Dryden, NASA's deputy administrator, told this to 200 members of the International Benjamin Franklyn Society at their annual meeting in New York.

He said project Mercury has cost each American about one dollar a year during its three years of operation.

"Space exploration has major significance for the economic development of the nation far beyond the direct effects of the spending of millions of dollars," he said.

"The space age has given us high - temperature ceramics, ablating materials for heat protection, cheap liquified oxygen and other gases, and many processes and techniques which can keep our whole industrial system alert and constantly increasing its capabilities to build useful products to meet old and new needs."

SILVER BEAVER award winner, Frank M. Childers, left, is congratulated by Dr. Kurt H. Debus, LOC Director. Childers was cited for his outstanding work with the boy scouts.

Troop 324's Scout Master Cited For Community Service

Frank M. Childers, aerospace technologist with LVOD's Electronic Engineering, Measuring and Tracking Office, has received the Silver Beaver Award for distinguished service to the Boy Scouts.

He is the fourth person in Brevard County ever to be awarded this highest of all Boy Scouting honors.

Childers has spent 16 years working with Scouts and is presently Scoutmaster of Troop 324 in Cocoa.

He was cited by the awards committee for outstanding service to his community and its youth.

The award includes a silver medal and a certificate signed by President Kennedy and former Presidents Eisenhower, Truman and Hoover.

"I consider my work with the Scouts an investment in the youth of our country," Childers said.

A 16-year Civil Service veteran, he was a member of the original Army missile firing lab at the Cape, and participated in all Redstone and Jupiter launches and in the early phases of the Pershing program.

Space Age Long Johns

Should MA-9 Astronaut Gordon Cooper happen to say "no sweat" while in orbit, his remark would assume a literal meaning.

Cooper, like his five American predecessors in space, will wear a special kind of underwear to reduce the discomfort of perspiration.

It's actually a simple cotton undershirt, but it has patches of honey-combed material in it. Air circulates through the honeycombs and evaporates perspiration, drawing it into the air conditioning system where it can be filtered out.

Space Chairman Named

Senator Clinton P. Anderson (D. - Wash.) will give up his chairmanship of the Senate Interior Committee to head the Senate's increasingly important Space Committee.

He succeeds the late Senator Robert S. Kerr (D. - Okla.)

Representative Edward Gurney (R. - Fla.), Whose 11th District encompasses Brevard County, and Representative Richard Fulton (D. - Tenn.), have been appointed to the House Space Committee.

STEPPING OUT of their helicopter for groundbreaking ceremonies on Merritt Island Monday are D. Brainard Holmes, left, Director of NASA's Office of Manned Spaceflight, and Dr. Wernher von Braun, Director of the Marshall Spaceflight Center.

Space Knowledge To Be Used For Improvements On Earth

Practical, earth-bound uses for space age technology will be discussed at a forthcoming conference in Oakland, Calif.

Carrying out an edict of Congress and a challenge of President Kennedy, more than 100 of the the nation's top scientists, educators, industrialists and government representatives will meet next month with NASA Administrator James E. Webb to work out methods of transmitting such knowledge.

Conference Director C. L. Dochterman of the University of California, said, "Telstar is just one example of how space can affect our daily lives. The weather and communications satellites are other ways. But we hope to get even more specific.

Sanitation Systems

"For instance, can the highly-designed sanitation systems planned for our Apollo moonship be utilized by cities, eliminating miles of pipes? Could the Apollo water purification system be used by eastern cities where this is a problem?

"The heat - resistant space shields of our re-entry space vehicles may even be the answer to fireproofing in our big buildings. The possibilities are limitless."

Another use, of particular interest to rust - conscious Floridians, would be the possible use of heat - resistant zinc oxide missile coatings as protective covering against sea spray and salt on metal windows, automobile bodies and other exposed metals in common use.

Lower Prices

Jerome Teplitz, NASA assistant director for the Office of Industrial Applications, said one manufacturer of air conditioners already is using NASA findings gained in Saturn rocket research in a special welding process to lower costs and sales prices.

The conference will be jointly sponsored by NASA and the Ford Foundation, in cooperation with the University of California.

Apollo-nauts Visually Steer Bug Landing

America's Apollo astronauts may rely more on "eyeball' steering than on complex equipment in returning to their spacecraft after their first lunar explorations.

According to Arthur Vogeley of the Langley Research Aerospace Mechanics Division, astronauts on the moon will be able to see the Apollo passing over them during its orbits.

"After the spacemen start from the moon's surface to return to the Apollo, they can make visual references as they fly a pursuit - type course," Vogeley said.

The first men to reach the moon will not work in "tremendous brightness," he added, since they will be on the "earthshine" side, with the earth reflecting the sun's light to the moon, rather than direct blazing sunlight.

A beacon on the orbiting Apollo is expected to be easily visible to the explorers returning from the moon in their lunar excursion "bug."

Relocation Expenses Subject Te New Taxes

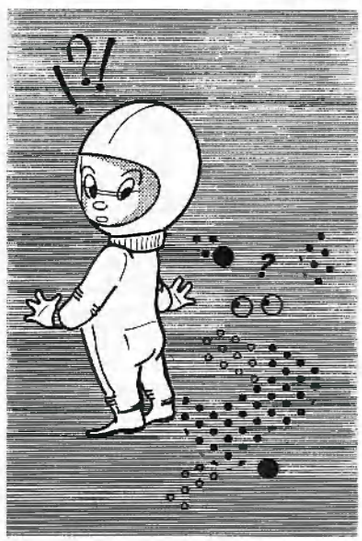
A recent Internal Revenue Service ruling may have a direct effect on many NASA-Cape employees.

The IRS has ruled that payments made to "newly-hired employees" for expenses incurred in moving to a new place of employment are to be considered as wages for Federal employment tax purposes.

The IRS has been requested to define "newly-hired employees" and to advise whether this ruling applies to transferred Federal employees. Further information will be published when received.

Meanwhile, present employees who have not been transferred from another Federal agency are required to report such payments as income received during the year in which the payment is made.

Women today are employed in nearly four-fifths of all Federal-service occupations.



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RUSSIANS REPORT 'CREEPING SPOTS'

When America's astronauts leave their lunar excursion module on the moon later this decade for a hike across the lunar surface, they may encounter some "creeping spots" and "shifting craters".

According to a report published by the Russian newspaper, Pravda, the moon is not a dead world.

During recent years, said the report, the crater Linne has decreased to half its former size, the crater Alhazen has disappeared, and small craters have formed on the bottom of another lunar landmark, Pluto.

At sunrise greenish - gray spots periodically appear at the bottom of some craters.

Pravda adds that these spots in the bottom of crater Eratosthenes even appear to some observers to be moving.

NASA NEWCOMERS

Fourteen new employees joined NASA - Cape operations during the week:

Charles LaPorte, Walter Houck, Richard Cauble and Lyle Andrews: LVOD.

Charles Patterson, Ollie McCurry and William Graham: MSC.

Herman Brunke and Sandie Corbin: Facilities.

Wanda Peterman: Heavy Space Vehicles.

Barbara Nolan: Protocol.

Kenneth Lozer: Technical Information.

Martha Duke: Personnel.

William Shada: Financial Management.

PLANETARY PLOTTER Lester Keene, LVOD Aerospace Technologist, checks chart with lunar landscape on this planetarium demonstration machine. Capable of demonstrating astronautical phenomena and planetary positions, past or present, the machine also shows planets and stars as points of light on its "wide screen" surface.

Astronauts To Hibernate In Deep Space Say Medics

Long-term interplanetary flights may require astronauts to use a "buddy-buddy hibernation system" in space.

Such a proposal, published in the American Medical Association's Journal, would have one spaceman working while his companion slumbered in drug-induced hibernation.

This would slow the life processess down to a minimum in a state of suspended animation. The astronauts would take turns between working and hibernating.

Unsolved Problems

It is evident, the article stated, that manned probes into outer space present a number of difficult and as yet unsolved biomedical problems, and engineering feats in rocketry are out-distancing supporting medical developments.

Perhaps one way to minimize life-supporting systems in space explorations, it was suggested, would be to develop chemical compounds that induce hibernation in half a space-ship crew at a time, in rotating fashion.

During hibernation the body withstands a number of stresses, including radiation exposure, that are more harmful to the body in its normal living state.

The perfect drug, or combination of drugs, to induce harmless hibernation, however, is yet to be found.

Capsule Displayed

Astronaut John Glenn - that is a wax figure of him - is now on public display inside his Friendship Seven capsule in the Smithsonian Institute's Air Museum in Washington.

Although the craft, shown in orbital position, has been open to viewing for a month, formal acceptance ceremonies will be held February 20, on the flight's first anniversary.

Glenn and several fellow spacemen are expected to take part in the ceremonies.

LOC Future Studies Chief Tells Of Space Laboratory

George von Tiesenhausen, LOC's Chief of Future Studies, told members at the annual Institute of Aerospace Sciences meeting in New York that the U.S. will need an orbiting service station by 1970 to launch and repair rocket ships.

It would be placed into space in two sections, he explained.

First, a giant Saturn C-5 rocket would put a 98-foot section into orbit for the scientific laboratory.

Staff members would reach the laboratory in Apollo space buses, patterned after the vehicle that is to land Americans on the moon. About 15 men would man this first section, von Tiesenhausen said.

Telescoping Hangar

Then another Saturn rocket would carry up the second section — a space service station with a telescoping hangar that could extend to cover some of the smaller rocket ships.

NASA has no formal plans for a manned space station, but planners are urging preliminary studies on some sort of manned orbital scientific lab.

The hangar would provide protection from meteorites for the crew, eliminate some of the space unit heating problems and allow a ship being worked on to be lighted on all sides, instead of just the side nearest the sun.

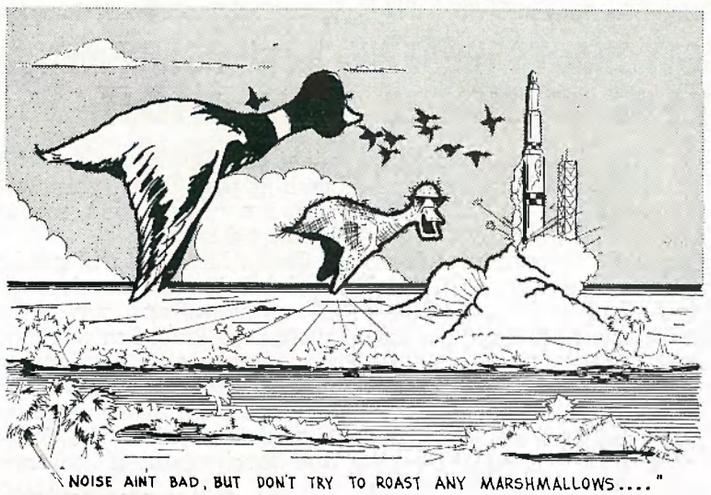
The entire station could be fashioned from Saturn rocket liquid oxygen tanks, von Tiesenhausen said.

The rocket ship would be divided equally into a number of floors, and these separated into rooms, each capable of being sealed in case of a puncture and loss of air pressure.

Extending up to 70 feet ahead of the bullet-shaped station would be a telescoping projection with a small nuclear power plant at the end.

NASA Wives To Meet

The NASA Wives Club will meet next Wednesday at the Patrick AFB Officer's Club. Call Mrs. Robert Green, AM-2-1612, for reservations. All wives of NASA employees and contractors are invited.



Disturbing Decibels

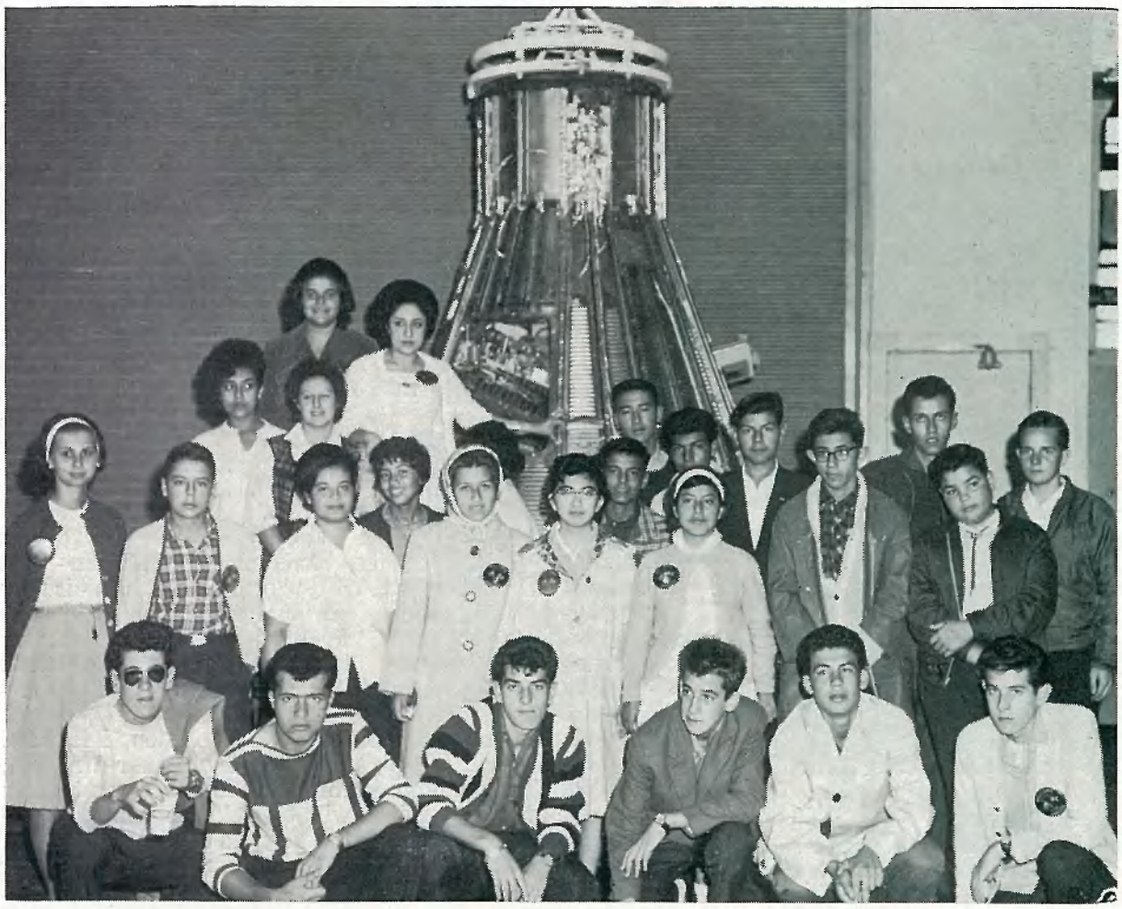
BIRD STUDY FINDS CAPE 'HOME' NORMAL

NASA had one of its busiest flight days last November 16, when more than 2,700 birds were launched—all triggered by Saturn SA-3.

This is what a U.S. Bureau of Fisheries and Wildlife team found when they toured nesting areas and feeding spots within 8,000 feet of the Saturn Launch Complex 34.

They made the study to determine if rockets frighten away the Cape's expansive bird population. Brevard Audubon Society members recently counted 197 different species here.

The wildlife people found 40 species near the launch pad and concluded the mighty Saturn's roar only temporarily disturbed the birds—perhaps no more than a low flying aircraft or a truck's rumble causes humans to toss and turn during the night.



SOUTH AMERICAN SIGHTSEERS, some 54 strong from Lima, Peru, high schools, were given a Cape tour and briefing Saturday during their two-week visit to Florida. Part of the group is shown above at Hanger S. They also viewed Mercury Control, and Launch Complexes 34 and 56.

ASTRONAUTS RECEIVE NEW ASSIGNMENTS, GLENN TO PIONEER LUNAR EFFORT

NASA's Manned Spacecraft Center has announced new assignments for its 16 astronauts.

John Glenn will spearhead the lunar landing effort and Scott Carpenter will direct the lunar excursion module for the program.

Gus Grissom has been assigned to the Gemini Project. Gordon Cooper and Alan Shepard remain in their respective positions as prime and back-up pilot for MA-9.

Wally Schirra will specialize in overall operations and training, and Deke Slayton will continue his role as coordinator for astronaut activities.

Neil Armstrong will monitor development, design and use of trainers and simulators, and Frank Borman will concentrate on the booster design and development program.

Charles Conrad will specialize in cockpit layouts, instrument displays and pilot controls, and James Lovell will monitor design and development of all recovery systems, such as paraglider, parachute and lunar excursion module landing system.

James McDivitt will specialize in design and development of ordnance and navigation systems, Elliott See will monitor design and development of electrical systems and Thomas Stafford has been assigned to monitor the design and development of communications and instrumentation systems.

Design and development of flight control systems and related equipment will be the responsibility of Edward White, and John Young will monitor design and development of environmental control systems, survival gear, pressure suits and other personal equipment.

Sigma Xi Speaker

Joe P. Robertson, Saturn C-1 engineer, was guest speaker last week at the University of Georgia chapter of the Society of Sigma Xi in Tifton, Georgia.

It's Smooth, Man!

The earth's surface, even allowing for the towering peaks of Mt. Everest, the Alps and the Rockies, is actually smoother than a billiard ball, scientists say.

Its rough spots, ranging from mountains five miles high to oceans seven miles deep, shrink to nothing compared with its 8,000-mile diameter.

Valentine Dance Set

The NASA Womens Social Club will have a Valentine Dance Friday, February 15, at the Patrick AFB Officers Club.

Proceeds will go to the Brevard Training Center in Rockledge to purchase special equipment.

Tickets are $1.50 per person and may be purchased from Marilyn Krause and Helen Egan, E & L Building; Polly Rudolph, Kabbard Building; Cathy Posavec, CAC Building; Shirley Taylor, NASA Test Support Office; and Anne Hull, MSC.

22 LVOD EMPLOYEES RECEIVE AWARDS FOR CIVIL SERVICE

Service pins have been awarded 22 LVOD employees:

20 years — Fred V. Merrit; Electronic Measuring and Tracking Office.

15 years — Reuben L. Wilkinson and Frank M. Childers, Electronic Measuring and Tracking Office.

James L. Jackson, William G. Hardin, Clayton Garrett, John I. Brammer, Harry Shockey, Edward L. West and Curtis Armstrong; Mechanical, Structural and Propulsion Branch.

10 year — Frank D. Keck and Harold F. Barnes; Electrical Engineering, Guidance and Control Branch.

Wilburn V. Hicks and William T. Stealey; Mechanical, Structural and Propulsion Branch.

1 year — Charles R. Hafer; Electrical Engineering, Guidance and Control Branch.

Charles B. Schry; Mechanical, Structural and Propulsion Branch.

Thomas Barger, Steven J. Dodge, James D. DeVault, Samuel L. Newman, Wilma I. Grier, and Robert J. Cessac; Electronic Measuring and Tracking Office.

PURELY PERSONAL

Rocco A. Petrone, Chief, Heavy Vehicles Systems Office, has been promoted from major to lieutenant colonel, U. S. Army.

Mason R. Comer, Chief Systems Engineer for the Delta Vehicle Program here was presented a sustained superior performance award by Dr. Harry J. Goett, Director of Goddard Space Flight Center in recent ceremonies in Washington.

Facilities personnel got together Friday for a luncheon at Ramons honoring Ruby Legg, who is leaving for Huntsville. Ruby was Real Property Management secretary.

About 50 Audio - Visual Branch people were guests of Ginny Young recently for a Hobo Housewarming party. Technical Information Office Chief Jim Russo and his wife, and Reproduction boss Bud McLearn and his wife won prizes for the best costumes.