

# SPACEPORT

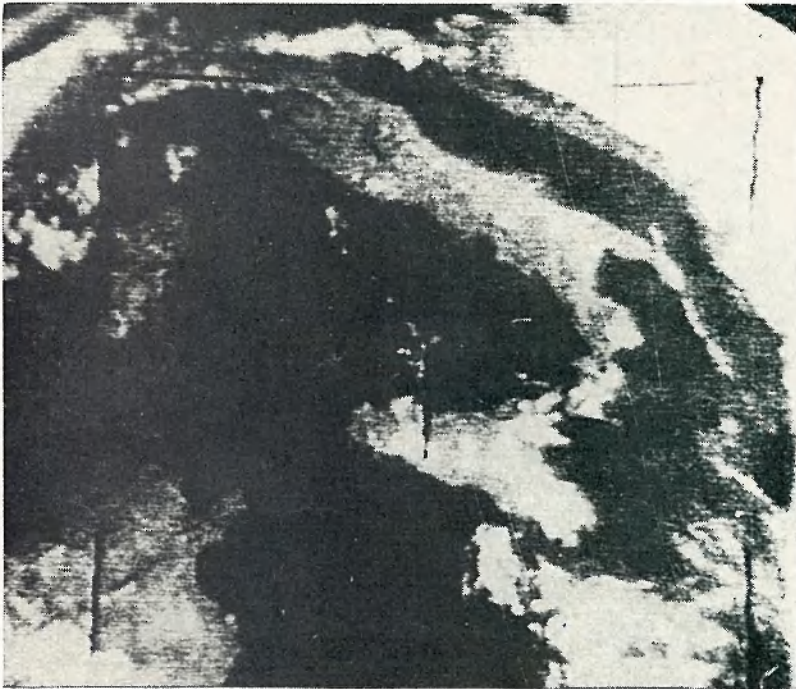


# NEWS

Volume 2, Number 24

NASA Launch Operations Center, Cape Canaveral, Florida

June 13, 1963



AMAZINGLY CLEAR photos, like this one of the Italian boot, Sicily, center, and the coast of Tunisia, lower left, have become the accepted trademark of Tiros. The seventh in the series of meteorological spacecraft is scheduled for launching within a few days.

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## Tiros Side Benefits Include Pinpointing Locusts, Fish

Tiros (for Television Infrared Observation Satellite) spacecraft have more than proven their worth as hurricane spotters, but they have also been useful in many other fields.

Past Tiros passes, for instance, have shown certain characteristics in the plots of equal value radiation which may serve to pinpoint the breeding grounds for tornadoes.

These patterns may also enable forecasters to locate pools of warm water in the oceans inhabited by certain types of fish; information that would greatly benefit commercial fishermen.

Tiros' cameras have also photographed ice pack conditions, and located ice boundaries in relation to the open

sea. Perhaps one of the most unusual applications of data relayed by Tiros comes from London, headquarters for the Desert Locust Information Service.

They report the satellites have been acclaimed as increasingly effective "secret weapons" in the international campaign to control the desert locust.

Last year Tiros' information made it possible for meteorologists to project the course and direction of the insect swarms with great accuracy over wide areas.

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## SEVENTH TIROS SATELLITE TO TRACK HURRICANES

A seventh Tiros satellite is undergoing final checkouts today in preparation for its launch next week.

The 281 - pound Tiros, shaped like an 18-sided steel

drum, is timed to orbit earth to give storm warning coverage for the first half of the 1963 hurricane season.

Like its predecessors, Tiros "G" will carry two cameras to photograph the earth's cloud cover. Both will have wide angle lenses that can cover an area 750 miles across from 400 miles up in space. An infra-red tracker and an electronic temperature probe have been added for this mission.

The new Tiros will be orbited by a Thor-Delta vehicle to cover one hemisphere while Tiros VI, launched last September, covers the other half of the world.

The Delta will be aiming for its 18th straight satellite success.

### Life Expectancy

Although each Tiros has a life expectancy of only three to four months, VI is still producing useable pictures with its wide angle camera.

So successful have past Tiros satellites been, in fact, it's doubtful if Arlene — the name of the season's first tropical storm — will be able to blow up even a gentle breeze undetected.

"Tiros satellites have been most helpful, especially in locating spawning storms," says Gordon Dunn, National

(See Seventh, Page 6)

### Display Opens Monday

LOC Director Dr. Kurt H. Debus and Major General L. I. Davis, Commander of the Air Force Missile Test Center, will appear Monday on NBC's Today television show.

They will be in New York to open the Cape Canaveral area display of the Florida Showcase Exhibit at Rockefeller Center.

## NY JUDGE EDELSTEIN FORESEES SPACE LAW

U. S. District Judge David N. Edelstein of New York, a space enthusiast with a keen interest in the future aspects of space law, toured NASA Cape facilities Monday.

In addition to stops at Launch Complexes 14, 17, 34, 37 and 56, the Judge was briefed on Mercury operations at Hangar S by G. Merritt Preston, Manager of MSC/AMR operations.

He was also briefed on the role of the Launch Operations Center by Deputy LOC Director Albert Siepert and C. C. Parker, Associate LOC Director for Administration.

"Every judge is interested in all phases of law," Judge Edelstein said, "and it certainly doesn't require a great stretch of the imagination to foresee the day when space law will become a part of judicial law."

"The seas were once uncharted and without laws," he said, "but there came a need for development of the laws to protect the duties and rights of men plying their trade on the seas."

"I'm intrigued with the possibilities and ramifications of space law. Such laws will grow in conjunction with actual exploration of space itself."

Judge Edelstein has been a U.S. District Judge since 1951. He was accompanied on his tour of Canaveral by Security Chief Charles Buckley.



## HATS OFF

Despite the fact that two lanes of traffic have been blocked off on 401, just south of the Cape since last week, traffic has been flowing at a normal rate.

The first day after the road was closed, monumental traffic jams clogged rush hour traffic, suppers burned, appointments were missed and tempers flared.

But thanks to Cape, county and state traffic officials, working closely together to solve the problem, the jams were freed within 24 hours.

It was suggested allowing both remaining lanes on 401 to be opened one way to rush hour traffic, northbound in the morning and southbound in the afternoons.

The Brevard Sheriff's office and the Florida Highway Patrol "bought" the idea and efficiently put it into practice.

They are to be commended for a job done well and swiftly.

Pan Am Security Police Sergeant James Louwerse also suggested two-laning northbound traffic one way on the Cape during the morning rush hour (see map, this page). Again, this has eliminated a bad bottle-neck and speeded up the heavy flow of traffic.

Our hats are off.

## CREDIT UNIONS — HOW THEY BEGAN

The Credit Union idea began over 100 years ago.

Friedrich Raiffeisen, mayor of a small German community, devised a credit society in 1849 to help his townspeople combat poverty and usury.

He reasoned that the members could save money together and make loans to each other at a low interest rate. The borrower's character would be the primary security for the loan.

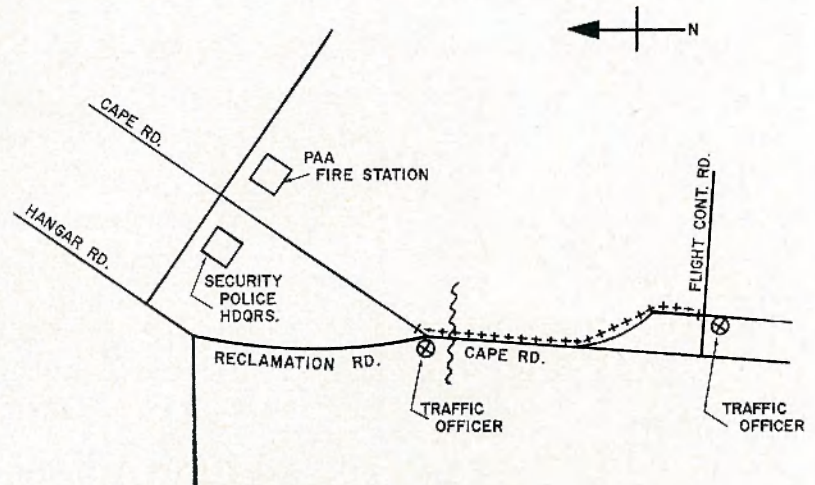
Raiffeisen's idea was a success. Before he died in 1888 he had started more than 425 credit unions. His idea spread to other countries and remains the basic idea of credit unions today. He is considered the father of the credit union movement.

The idea was brought to North America by Alphonse Desjardins (1854-1920), a legislative reporter in Quebec. Deciding that credit unions would be the answer to the usury that plagued his people, he founded his first union at Levis, Quebec, in 1900.

Six years later, Quebec passed the first credit union law in North America. In 1909, Desjardins started the first U.S. Credit Union (in New Hampshire), and assisted with passage of the first U.S. credit union law (in Mass.).

Edward A. Filene, a famous Boston storekeeper, was responsible for the rapid spread of credit unions in the United States. He saw the union as a way to put buying power through low-cost credit into the hands of working people.

He spent over a million dollars of his personal fortune to support the development of credit unions in America.



## Morning Rush Hour Traffic Speeded Up By New Plan

Northbound traffic during the morning rush hour from 6:45 to 7:45 has been speeded up considerably the past few days thanks to a plan devised by Pan Am Security Police Sergeant James Louwerse.

Under the plan, as shown in the map above, the small amount of southbound a.m. traffic is held up at intervals at the intersection of Reclamation Road and Cape Road.

This allows northbound traffic to move one way over both lanes of the Cape Road.

Southbound vehicles are allowed to proceed, at intervals, narrowing traffic to one lane each way. Then the "extra" lane is reopened to northbound travelers.

Security policemen are stationed at key points and direct the flow accordingly.

By opening two lanes to northbound traffic, a bothersome bottleneck has been eliminated.

Sergeant Louwerse advises all motorists to drive carefully and to observe the traffic officers' signals closely.

He said complete cooperation of drivers will further speed the flow of traffic.

### Barnes Race Field

NASA's racing Barnes family, Martha is in Personnel and Leroy is in Facilities, added more laurels to their bulging trophy case Sunday.

In a field of 65 entrants at Lakeland's Autocross competition, Martha finished first in her class, and Leroy was third in his race.

## SPACE ALMANAC

A CHRONOLOGY OF EVENTS IN SPACE EXPLORATION AND RESEARCH.

### 2 years ago

June 13 - 25, 1961 — Freedom 7 Mercury Capsule displayed to approximately 750,000 visitors at the Rassegna International Electronic and Nuclear Fair at Rome, Italy.

### 1 year ago

June 14, 1962 — Astronaut Alan B. Shepard, Jr., was awarded the Aero Club's Godfrey L. Cabot award in Boston, as America's first man in space.

### TELSTAR TO TEACH

Telstar II will set yet another record next month when it relays the first educational event ever programmed for a communications satellite.

Distinguished Columbia University Professor Moses Hadas will lecture, via Telstar, from New York to 500 students at four colleges in Mississippi and Louisiana.

The lecture will be part of a six-week course on great ideas in antiquity, which begins July 9.

**SPACEPORT**  
  
**NEWS**

# Surprising Statistics Reflect Salient Sidelights

What's the median age of Brevard's ever-expanding population? Surprisingly, it's a youthful 26.5 years.

Part of the Community Development Office's job is to assemble such key facts and figures on Brevard County and its people.

Armed with such statistics, they can better help plan for a progressive, orderly growth in Brevard.

Recent figures compiled by Chief Paul Siebeneichen and his staff uncover some little known and interesting facts

on Brevard life.

For instance 42 more people arrive in the county every day. (No wonder the traffic continues to get worse.)

There's good news for young girls in the area; 50.9 per cent of Brevard's population is male. But, alas, three out of every four men over 14 are married! Incidentally, 77.3 per cent of the gals over 14 are married too.

Women also play a major role in the county's workforce. More than one third of the gals over 13 are working,

and one of every five on the job has children under six years old.

For every 1,000 women in the county between the ages of 15 and 44, 1,849 live births have been recorded. Florida figures are 1,776 per 1,000 in this age bracket.

Median income per family in Brevard is \$6,123, far and away the highest in the state.

So it's reasonable that the median value of homes in the county is \$13,000, as against a state average of \$11,800.

Nine out of 10 homes in

Brevard are single family units, and each houses an average of 3.4 people.

Nearly two thirds of the homes have washing machines, 85 per cent have TV sets, 17 per cent have air conditioning, and 12 per cent are equipped with food freezers.

Garages and carports in 62 per cent of the homes shelter one car; in 29 per cent of the homes, two cars.

It pays to own a home in Brevard, for the county has the highest median rent per month rate in Florida — \$91.

## MSC'S DUGALD BLACK HONORED BY ALUMNI

Dugald O. Black, Technical Assistant to the Manager, Manned Spacecraft Center, Cape Canaveral, recently received the Outstanding Alumni award from the Indiana Institute of Technology in Fort Wayne.

He received the coveted Order of the Silver Slide Rule for his outstanding efforts in America's manned space program.

The distinguished service award was presented at the Institute's traditional Homecoming Awards Dinner.

Black's speech, before the annual business session of the Indiana Tech Alumni Association earlier in the day, reviewed the manned space flight program from Mercury through the Apollo program. He concluded his presentation with a film of Major L. Gordon Cooper's recent Mercury flight.

As Technical Assistant to the Manager, Black is responsible for planning, implementing, and executive supervision of all preflight activities required to prepare the launch vehicle and spacecraft for flight test programs.

He received a BS Degree in Mechanical Engineering from Indiana Institute of Technology in 1943.

## United Credit Unions

Credit unions should unite with each other to increase their services to their members and fulfill their obligation to bring credit union benefits to all people.



DUGALD BLACK, right, Technical Asst. to the Manager, MSC/AMR operations, receives the Indiana Institute of Technology's Order of the Silver Slide Rule award from past recipient James Shank.



FIRST DEPOSITOR in the Credit Union's office last week was William L. Gant of LVO's Measuring Group. Helen Egan accepts his check.

## Credit Union Membership Grows Fast

The NASA/MILA Federal Credit Union opened its office doors last week and took in more than \$3,000 in deposits during its first five days of operation.

Added to the initial deposits from the Credit Union's 113 charter members, the total figure was approximately \$3,800 at the close of business Friday.

In addition to the deposits, two loan applications were submitted during the week and one was approved Friday.

Cashier Sandy Arnette reported employee acceptance of the Credit Union was excellent.

"It's going over real well," she said. "We gained about 60 new members last week alone."

Credit Union President Sam Mayo said "We're very pleased with the response. It's gone much better than we had anticipated."

As an extra service to members, the Credit Union will cash personal checks up to \$10.

Membership is open to all NASA employees based in Florida and members of their immediate families.

Membership fee is 25 cents and minimum deposit is \$5.

The Credit Union office is located in Trailer 855, Hangar D. Office phone is UL-3-3161.



NASA'S RAPIDLY - molding Merritt Island Launch Area is a daily scene of bustling activity, as these shots by photographer Russ Hopkins indicate. At left, a cement container is lowered to construction site. Below left, a mason swiftly and skillfully lays blocks. Above, workers "commute" via outboard. Right, cement pours into container. Below right, adept driver maneuvers his giant vehicle. Lower right, shovelers dig in. Below, sign seems superfluous amidst whirl of activity.





**MEMBERS OF NASA'S Safety Committee met Monday and elected a new chairman, R. F. Welning of MSC. Committee members are, left to right, Joe Lendle, Frank Childers, W. B. Calhoun, C. M. Kirk, Barbara Hastings, past chairman W. N. McClintock, Welning, Jack Cagle, T. J. Snier, R. N. Green, H. B. Hannaford and H. W. Miller. Standing left to right are Tim Kerns, Sam Argubright, S. L. Brown and Charles Hall.**

## NASA To Fly Saturn S-IVs Aboard B-377

NASA has signed a contract with Aero Spacelines, Inc., Van Nuys, Calif., for the use of a B-377 (PG) aircraft in transporting Saturn rocket stages, engines, and other components.

This aircraft, the only one of its kind, is large enough to haul the Saturn S-IV stage, which is 18 feet in diameter and 40 feet in length.

Transporting this Saturn I second stage by air from the west coast where it is built and static tested to the launch site at Cape Canaveral will require about 12 hours of flying time.

This compares to a period of three weeks necessary for the alternate method of shipment — by water through the Panama Canal.

### Strato Cruiser

The plane is a Boeing Stratocruiser which was extensively modified and outfitted for this special mission by the owner. The diameter of the plane's fuselage has been nearly doubled. Provision has been made for partitioning the fuselage into two sections for loading and unloading.

Aero Spacelines has been modifying and testing the aircraft for several months. Test flights leading to official Federal Aviation Agency certification of airworthiness are now in progress and are expected to be completed this month.

The contract, based on fixed rates per mile depending on actual miles flown, is expected to cost \$194,850.

Aside from cross-country S-IV flights, the aircraft will be used to transport the S-IV from the Douglas Aircraft plant in Santa Monica, where it is manufactured, to the static test site at Sacramento.

In addition to transporting the S-IV stage, the craft is to be used for hauling F-1 engines, large booster components, tooling and fixtures and other cargoes specified by NASA.

## Cape Gals Compete For Beauty Crown

Two beautiful Cape employees, Vikki Gard, secretary on the technical staff for the assistant director of Instrumentation, and Evelyln Swartz of the Technical Library staff, competed in the second annual Miss Eau Gallie Pageant Saturday night. Both were among the five finalists.

Evelyln placed third in the competition to win a handsome trophy and a \$100 scholarship.

Vikki pantomimed a Doris Day number, "Pillow Talk," and Evelyln pantomimed "Honey Bun" from South Pacific, during the talent portion of the show.



**SWAMPED BY "FAN MAIL" for her boss, Gordon Cooper, secretary Millie Guice ponders problem of how to answer it all. After handling a good portion of it last week, Millie took time to rest with a trip to her hometown, Starkville, Mississippi. News Photo by Don DeFillips**

### Colorful Skies

Observers near Wallops Island, Virginia, are being treated to rainbow clouds these days, part of a NASA experiment to study atmospheric conditions.

Vivid clouds of sodium vapor are ejected into the sky at an altitude of 27 to 127 miles, and produce bright red, orange and pink colors, visible for hundreds of miles.

## RELAY TRANSMITS PRESIDENT'S ADDRESS

President Kennedy's participation in ceremonies opening the World Food Congress in Washington last week was transmitted to European TV viewers by NASA's RELAY I communications satellite.

The President addressed the Food Congress in the Department Auditorium and RELAY I carried a video tape of

the event during its 1345th orbit.

Countries receiving the program included Belgium, The Netherlands, Germany, Austria, Denmark, Norway, and Italy.

A portion of the same pass also was used to transmit U.S. reaction to the death of Pope John XXIII to European networks.



FIRST WINNERS of LOC's Suggestion Awards program were presented their certificates and cash prizes recently by Emil Bertram, left, Suggestion Awards Committee Chairman. Receiving awards were, left to right, Steiner Rowell, Gloria Darwin, standing, Dorothy Byrd and Sid Harbin. At right is Wally Hudgins, executive secretary of the Incentive Awards Committee.



AN INTERNATIONAL TOAST is raised at dinner for the President of India and his party. Left to right are Mrs. Kurt H. Debus, His Excellency Dr. Sarvepalli Radhakrishnan, President of India, LOC Director Dr. Kurt H. Debus, Her Excellency Lakshmi Menon, Minister of External Affairs of India, and Brig. Gen. Harry Sands, Vice Commander of the Air Force Missile Test Center. The President and his party were given a complete tour of Canaveral, which included briefings on Mercury, Saturn and Tiros programs.



THE E & L BUILDING lobby was a busy place last week as NASA employees swapped old badges for the new, color ones. The badging program is now virtually 100 per cent completed according to security officials.

## SUGGESTION AWARDS PRESENTED TO FOUR

The first employees to reap cash benefits from the Suggestion Program at LOC are Gloria Z. Darwin, Director's Office, Steiner L. Rowell, Support Services Office, and Sid Harbin, Personnel Office.

Rowell hit the jackpot twice with two suggestions approved for cash awards totaling \$255. His suggestions concerned a supply receiving assembly line and an inspection damage board.

Mrs. Darwin and Harbin were awarded \$20 each for suggestions involving new forms which improved administrative procedures.

The LOC Suggestion Awards Committee also approved a \$25 cash award for Dorothy C. Byrd, Guidance and Control Office, LVO, for her suggestion resulting in an improved time reporting procedure adopted by LOC's Financial Management Office.

## SEVENTH TIROS

(Continued from Page 1)

Hurricane Center Director and Chief District Meteorologist for the U.S. Weather Bureau in Miami.

"Tiros HI, for instance, spotted Hurricane Esther in 1961 two days before it was possible to get aircraft reconnaissance into the storm area."

Tiros V, operational for a record 10 1/2 months, gave first warning on half the world's 10 most serious storms last August.

It relayed more than 49,000 earth cloud cover pictures, on which the Weather Bureau based 396 storm advisories.

To date, more than a quarter million cloud cover pictures have been taken by six Tiros satellites.

Data gathered by Tiros G will be transmitted to ground stations at Point Mugu and Wallops Island.

Later this year an eighth Tiros will be launched for additional coverage of the hurricane season's second half.

The Tiros program is under the overall supervision of NASA Headquarters with direct management under the Goddard Space Flight Center. Goddard's Field Projects Branch at Cape Canaveral is responsible for the launch.



**ADMIRING OLD GLORY**, Wanda Peterman, Saturn V Project Office secretary, reminds us that tomorrow is Flag Day. The original Old Glory was born June 14, 1777.



**GEORGE C. GENTRY**, right, receives a 15-year service award from **John J. Neilon**, Associate Chief of Goddard Space Flight Center's Field Projects Branch at Cape Canaveral. Gentry, a systems engineer assigned to the NASA Delta Project, has had previous civil service experience with the Army, the Air Force, and NACA. A native of Chattanooga, Tennessee, Gentry resides at 340 Bellaire Drive, Cocoa, with his wife Sally, and their son Gary, 5.

# ELECTRIFIED PARTICLES AID COMMUNICATIONS

Man has brushed some 50 years of theory aside to report that his scientific instruments actually observed how part of the earth's ionosphere is continuously created. This blanket of electrified particles makes radio communications on earth possible.

The discovery, reported by researchers at NASA's Goddard Space Flight Center, is regarded as a major scientific contribution to understanding the effects of the sun's radiations on the earth's atmosphere.

It is a fledgling step but one which holds promise for development of a system where man would know the precise physical condition of the ionosphere at any time. This, in itself, would have profound effects on world communications.

### Many Theories

While many theories have been advanced concerning the creation of the ionosphere, there had been no simultaneous measurement of the responsible radiations and the resulting ionization.

Direct evidence was provided for the first time on March 8 with the flight of a low-cost Nike-Apache sounding rocket launched from Wallops Island, Virginia by a simultaneous measurement of a specific solar radiation line and the ionization it is thought to create.

Scientists had theorized for many years that intense solar ultra-violet and x-ray radiations bombarding the earth's atmosphere were capable of breaking apart electrically neutral gas particles.

Since the ionosphere begins at about 35 miles and extends several thousand miles into space, the problem, for many years, has been to positively identify which of the many portions of the solar radiation spectrum cause this ionization at specific altitudes above the earth.

The D-region, lowest layer of the ionosphere, extends between 35 and 55 miles. It has been particularly difficult to observe because of the low ratio of charged particles to the denser neutral gases.

The most favored theory of

the formation of the daytime D-region during conditions of low solar activity was one proposed in May, 1960, by Professor Marcel Nicolet of Belgium and Arthur C. Aiken, Jr., of Goddard. Dr. Aiken was one of the experimenters on the Nike-Apache rocket flight.

In addition to observing actual creation of ionization, the Nike-Apache flight made a significant breakthrough in the measurement of electron densities by counting as few as 100 electrons particles in one thousand cubic centimeters with an error potential of only 10 particles for the same area.

NASA plans to launch additional sounding rockets to pin-point which specific solar radiation lines are creating ionization at specific altitudes in other regions of the ionosphere.

### Cooper Fete Saturday

Major Gordon Cooper will be honored by the Mercury Club with the traditional post-flight launch party, Saturday night at the Cape Colony Inn.

Refreshments at 6:30 p.m. will precede the banquet style dinner set for 8:00.

The Gene Fernet Orchestra will set the musical pace for this gala, semi-formal dinner and dance. Some 450 NASA Manned Spacecraft Center, contractor, and sub-contractor employees will be attending, including all the astronauts.

### APPLICANTS SOUGHT

Wanted: Young men not over 34 years of age. Must be U.S. citizens, either civilians or in military service, not more than six feet in height, have a degree in engineering or physical science, and have acquired 1,000 hours jet pilot time.

Opportunity: Unlimited.  
Job: Manned space flight.

The above would make a rather unusual want ad, but NASA is looking for 10 to 15 new astronaut recruits — to be selected sometime this summer.



**PROUD POP** of this handsome family is Jim Deese, Chief of Facilities' Advanced Studies Group. Left to right are, Tommy Michael, 7; Mary Walburga, 3; Yvonne Marie, 10; Sally Maria, 19; Jim, Sister Mary Carmel, Mrs. Mary Deese, Jimmy H. II, 15; Billy Patrick, 12; Larry Edward, 5, and Patrick Joseph, 9. Father's Day is Sunday.



**ANOTHER PROUD POP**, Charles Taylor of LVO Research and Development, who supervises the feeding of his newly adopted, one-month-old daughter, Leigh Anne, by his son Jerry, 6.

**USA PERSONNEL**

Facilities Office: Donald N. Holly, Robert M. Lupo, Thomas B. Cavanaugh and M. Frances Slaughter.

Support Services Office: Bonnie C. Black, J. Larry Williams and James W. Craig.

Instrumentation Planning Office: Thomas Broskie and William R. Gore.

Launch Support Operations Division: Russell K. Wasson.

Heavy Space Vehicle Systems Office: Paul V. King, Jr.

Procurement and Contracts: Dorothy A. Sweitzer.

Financial Management Office: John W. Vann.

Legal: Robert W. Elrod.

Elect. Engineering & Instru. Sys. Office: Ray A. Work, III, Gary G. Routh, and Robert T. Moore.

Mechanical Structural & Propulsion Systems Office: James A. Foster and Lyman F. Rogers.

Elect. Engineering Guidance and Control Systems Office: W. L. Partain.

Personnel: Christine Hamlin.

Management Analysis Office: Robert L. Fairman.

Goddard Space Flight Center: John W. Fassett.



Dear Sir:

"I would like to have a rocket with my name on it because everybody is not treating me right. Please, it would be a great pleasure for me."

Charles D.  
Baton Rouge, La.

**Cape Shipment Soon**

The initial Titan H launch vehicle slated for use with Gemini is expected to be shipped to Cape Canaveral within a few weeks.

The Martin-built booster will undergo extensive ground checkout of all systems, but should be ready for first unmanned Gemini mission early next year.