



# GODDARD NEWS

GODDARD SPACE FLIGHT CENTER

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*The National Aeronautics and Space Administration*



JULY 20, 1961



(Left to Right) John Donley, Charles Hamilton and Robert Bourdeau of the Planetary Ionospheres Branch Check-out instrumentation for Explorer VIII.

## DATA FROM EXPLORER VIII VALUABLE TO SCIENTISTS

Data from Explorer VIII has provided scientists with valuable new information on the ionosphere.

Analysis of the data received from the satellite uncovered a new way to orient a spacecraft without the use of optics and has contributed the most significant information to date on micrometeoroid impacts in space.

Robert Bourdeau, Head of the Planetary Ionospheres Branch said, "Explorer VIII was 95 percent successful." It sampled the ionosphere for evidence of its electrical and chemical make-up and gave a better picture of "cosmic dust" distribution than had ever been obtained before.

Explorer VIII carried a total of ten experiments. Five of these experiments were aimed at a study of the ionosphere. Three were used to determine the characteristics of an ionized cloud that forms around a satellite due to its interaction with the ionosphere. The last two experiments were designed to study the characteristics of interplanetary dust particles.

Explorer VIII was launched on November 3, 1960, aboard a Juno II, with a life expectancy of two months. Transmission ceased on December 27 after 1,300 hours in orbit. During this period Explorer VIII provided 500 "bits" of information every second. Final analysis of this information will not be completed for six months or more.

## DEDICATION OF GODDARD INDUSTRIAL CENTER

Tribute was paid to Dr. Robert H. Goddard at the dedication of the Goddard Industrial Center in Worcester, Mass. on June 19.

Dr. Harry J. Goett, GSFC director, gave the opening address. In honor of Dr. Goddard and the dedication of the Center, Dr. Goett said: "Excitement, optimism, promise—I think these words accurately describe the predominant feelings here today. They also represent the basic attitude behind the life work of the great scientist and human being in whose name we are dedicating this industrial park. Those of us actively engaged in the National Space Program, particularly the scientists at the Goddard Space Flight Center, feel keenly this legacy of Dr. Goddard.

"But his legacy was more than one of the spirit. In the course of his work he founded a whole new field of technology—rocketry—which is the very key-stone on which our present efforts in the exploration of space are based. Dr. God-

dard truly deserves the title 'Father of the Space Age.'

"When you peer a bit more closely at the manner in which he earned this title you are impressed by the fact that he was truly an unusual man—an odd combination of dreamer and realist—of thinker and doer. Small wonder he has been described as the man who 'Dreamed one of the longest dreams in history and single-handedly launched the age of the rocket as surely as Orville and Wilbur Wright launched the age of aircraft.'

"If Dr. Goddard were alive today I am sure he would be dreaming of ways and means to control the weather, as well as predict it."

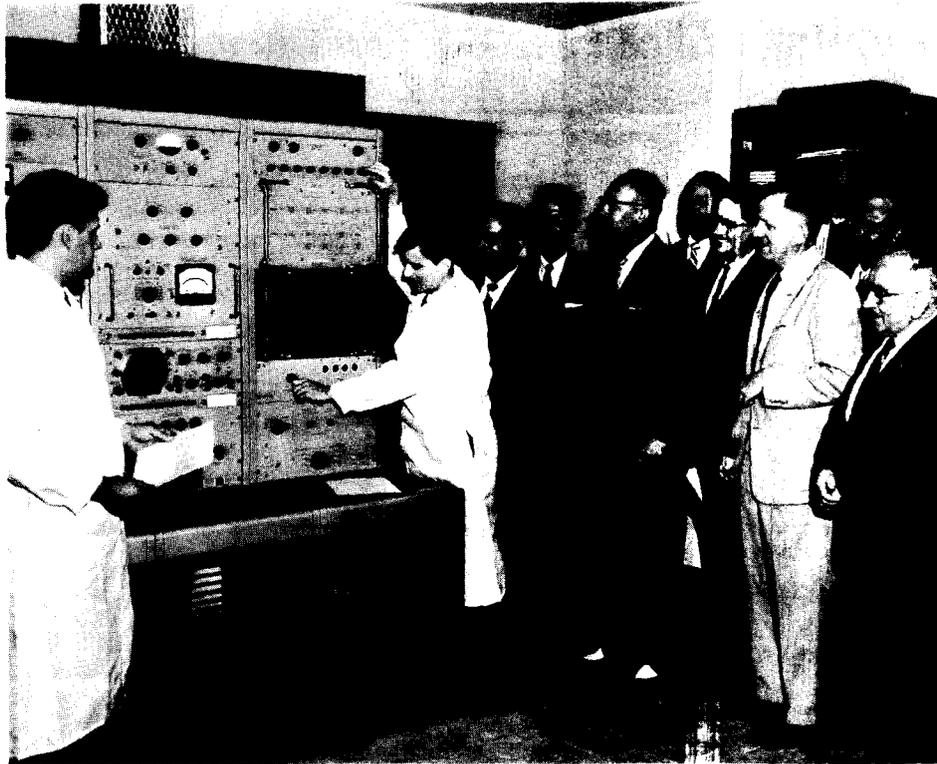
Forrest W. Seymour, President of Worcester Area Chamber of Commerce, presented Mrs. Goddard with a memorial plaque.

It is estimated that eventually more than 1,300 will be employed at the development.

## NATIONAL INVENTORS COUNCIL TOUR GSFC

Recently members of the National Inventors Council were guests of GSFC. Some 25 members were briefed on the Goddard mission and given a tour of the principal facilities.

The Council is a civilian agency of the Government. It has the task of bringing to the attention of the military any inventive idea of potential value to the national defense. It also refers to other Government departments or agencies any invention which might contribute to the national welfare.



Robert Stepp, Field Service Engineer (left) and Richard Boynton, Project Engineer with MB Electronics demonstrate the simplicity in operation of the automatic system. Left to right: Neal Granick, Structural Dynamics Branch; John C. New, Test and Evaluation Division; Charles Brown, President of MB Electronics; E. Anderson, Chief Engineer for MB Electronics; Galt Booth, Executive Vice President of MB Electronics; Eugene W. Wasielewski, GSFC Associate Director; Maurice Krueger, Representative for MB Electronics; and Dr. Elias Klein, Test and Evaluation Division.

## GODDARD GETS THE FIRST

A new type of automatic random vibration system has been installed in Building 4 in the Test and Evaluation Division. This is the first system of its kind which will automatically compensate for the resonances of vibrator-satellite combinations. It will produce a uniform power spectral density input to the spacecraft or a specified shaped spectrum of nearly any type in the frequency range from 20-2000 cps.

John C. New, Chief of the T & E Division has stated that the new system represents one of the most significant advances in the field of random vibration testing because the time required to compensate has been reduced from a matter of several hours to minutes.

The MB Electronics Division of the Textron Corporation developed the system for GSFC.

## TOWNSEND RECEIVES HONORARY DEGREE



DR. JOHN W. TOWNSEND, JR.

Dr. John W. Townsend, Jr., Assistant Director for Space Science and Satellite Applications, recently received an honorary Doctor of Science degree from his alma mater at Williamstown, Mass.

On graduation from Williams College in 1949 Dr. Townsend joined the NRL. He came with NASA as Chief of the Space Sciences Division in 1958.

Dr. Townsend was the Navy nominee in 1953 for the Arthur S. Flemming Award. He is also the holder of a Professional Achievement Award, given him in 1957 and during the same year received the Meritorious Civilian Service Award from the U. S. Navy.

(See TOWNSEND on Page 3)

## NASA RECEIVES PRESIDENT'S SAFETY AWARD FOR '60

Last year, NASA maintained the lowest accident frequency rate of all Federal agencies engaged in industrial operations.

In recognition of its accident prevention program and safety record, NASA received the President's Safety Award for 1960.

This award is presented annually to the department or independent agency of the Federal Government with between 10,000-to-75,000 employees showing the most outstanding record of performance and accomplishment in occupational injury prevention.

To be eligible for the award, an agency must show a decline in the accident frequency rate and the severity of disabling injuries. The agency is then rated on its over-all accident prevention program. NASA was rated at 95 percent of perfect.

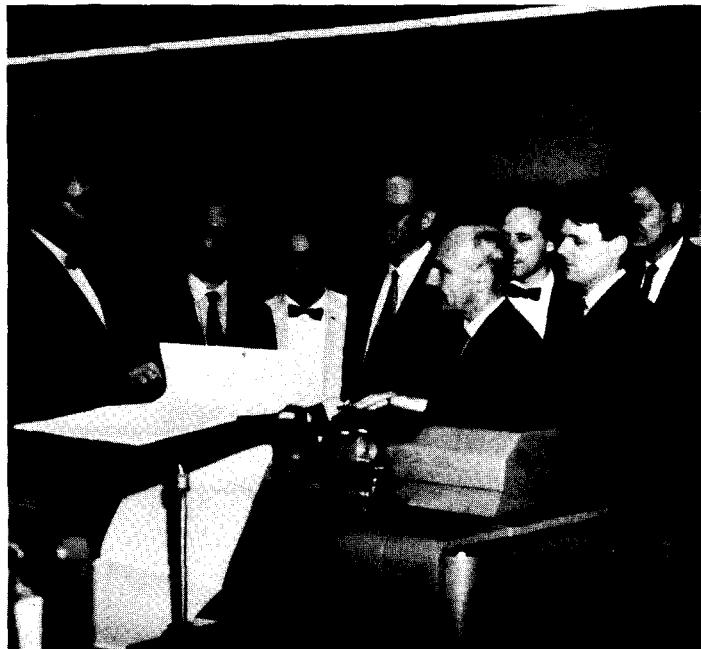
NASA safety officer, George D. McCauley said that NASA's hazardous activities include use of radio-active materials, high voltage electricity, exceedingly high air and gas pressures at temperatures of several thousand degrees fahrenheit, test flying of experimental aircraft at supersonic speeds at altitudes in excess of 100,000 feet, manned space flight,

developing and testing high-energy fuels that are highly toxic, rockets, and spacecraft, and operation of two nuclear reactors and a cyclotron.

In a letter to GSFC Director Dr. Harry J. Goett, NASA Administrator James E. Webb said: "In reviewing NASA accident experience for the past several years, I find that NASA not only has an outstanding program for preventing accidents but has ranked first in frequency rate of accidents as a Federal agency concerned with industrial operations. This could not have been accomplished without the excellent leadership provided by the heads of field installations and their safety officers, supervisors assuming responsibility for the safety of their employees, and the employees' participation in this program. It also points up the efficient manner in which very hazardous work can be accomplished in aeronautical and space research with only a few serious injuries to personnel and minimum damage to Government property. I hope NASA employees will endeavor to continue this excellent performance."



The "Coolies," winning Tenpin team, are proud to be the first on the GSFC Tenpin trophy. (Left to right) John Dege, Test and Evaluation Division; Jimmy Cooley, Systems Evaluation Branch; Warner Hord, Systems Evaluation Branch and John C. New, Chief of the Test and Evaluation Division. The Tenpin trophy is on display in the lobby of Building One.



John T. Mengel, (left) Assistant Director for Tracking and Data Systems, explains the function of Goddard's Computer complex in the Mercury Man in Space Project to visitors from Britain. Left to right: Mr. M. O. Robins, Project Officer for Scout Program; Mr. Robert C. Baumann, Head of Mechanical Systems Branch; Mr. R. N. Quirk, Under-Secretary, Office of the Minister for Science; Sir Harrie Massey, Chairman of the British National Committee on Space Research; Dr. A. P. Willmore, U. K. Project Scientist; Dr. D. J. Gerhard, Assistant Scientific Attache, UKSM; and Herman E. LaGow, Chief, Systems Review group of Space Science and Satellite Applications.

**DID YOU KNOW . . .**

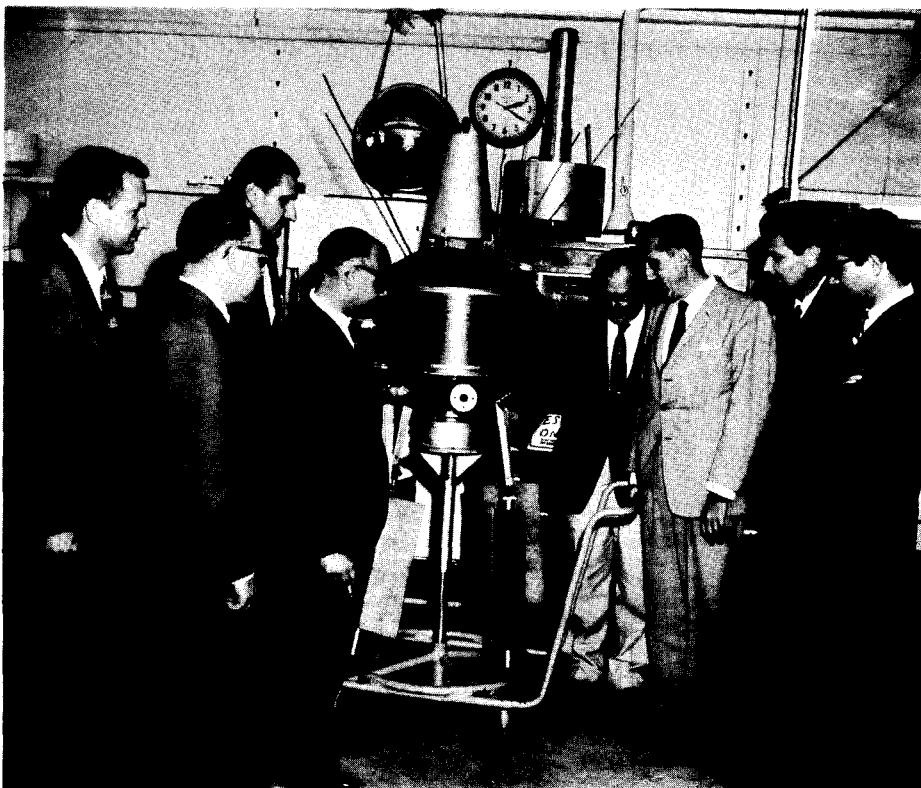
- Telephone calls can be received at Goddard direct from the outside by giving individuals who call frequently the new In-Dialing telephone number which is in the center of your telephone dial?
- When placing a call to another Government Agency the Government Interdepartmental dial system can be used? Detailed instructions are contained in the recently issued Goddard Telephone Directory.

**TOWNSEND**

(Continued from Page 2)

He holds membership in the following scientific and honorary societies: American Physical Society, American Meteorological Society, American Geophysical Union, American Rocket Society, Scientific Research Society of America, U. S. Rocket and Satellite Research Panel of the IGY, U. S. Technical Panel on Rocketry and "Committee on Aeronomy of International Union of Geodesy and Geophysics (IUGG), and, the DOD/IGY: Inter-Service Task Group for 'Rocket Exploration of the Upper Atmosphere'."

Dr. Townsend graduated from Williams College with a "cum laude," B.A. and M.A. degree with the highest honors in Physics.



An Argentine space science and technology group visited NASA Headquarters and field installations to discuss the Argentine space research between the United States and Argentina. A tour of Goddard was conducted for the group. Here, Francis N. LeDoux, Head of the Satellite Assembly and Quality Control Section, explains the S-51 International Ionosphere satellite structure. Left to right, Richard Barnes, NASA Hqs.; Licenciado Lucio Fernandez, Director of the National Meteorological Bureau; Robert W. Rochelle, Head of the Flight Data Systems Branch; Com. Aldo Zeoli, Deputy Director of the Instituto Aerotecnico de Cordoba; Francis N. LeDoux; Ing. Teofilo Tabanera, President of the National Commission on Space Research; Herman LaGow, Space Science & Satellite Applications; and Professor Dr. Carlos Varsavsky, Professor in the Faculty of Sciences of the Buenos Aires University.



Fabrication Division chalked up a "success" for their family picnic held at Patapsco State Park on June 18. The entertainment committee went all out on the picnic games. Above left, the kids joined in with the parents in the egg throwing contest. Above right, (l. to r.) Julius Sohn, Albert Glorioso and Robert Vogelsang take a try at "jumping off" some of their lunch in the sack race.

## SPACE CUP CHALLENGE SERIES INITIATED

Robert Bourdeau's Planetary Atmospheres Branch and Jack Peake's Flight R. F. Systems Branch have started a Space Cup Challenge series of athletic contests. Bourdeau's Branch could not help noticing the marvelous feats which Mr. Peake's branch were performing in the GSFC bowling league. Consequently, the first in the series was a 5-man team Tenpin bowling match, with Bourdeau's Tiger's emerging victoriously.

The Space Cup itself is an expandable design to permit later additions symbolizing events in the challenge series. The losing team conceives and presents each individual trophy in what promises to be a "way out" contest.

By agreement, the losers of each event may specify the next event in the series. The Flight R. F. Systems boys are still trying to pick a sure way to win the next outing.



Bourdeau's Tigers (left) accept the first trophy from the defeated Peake's Mogenbaiters. (Left to right) Charles Campbell, WTA; John Donley, Charles Hamilton, Robert Bourdeau, Jack Peake, John Libby, Norman Goldman, P. T. Cole, and Vincent Arillo.



The Associate Director, Eugene W. Wasielewski recently presented the Safe Driving Award to (left to right) Luther Tate, Charles A. Lee, Joseph H. Burrell, and Joseph Manning all from Management Services. Looking on is Fred X. Hartman, Head of the Safety and Health Office. The Safe Driving Award is presented for operating a Government motor vehicle a minimum of 8,000 miles within a 12 month period without a preventable motor vehicle accident.

### GODDARD NEWS

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