NASA

. . . spearhead to space . . .


PLACE NO ART

Thousands of years ago the American Indian on the prairie stared with awe into the vault of the heavens. The sun . . . the golden moon . . . the stars moved on forever over his forest home beautiful and untouchable. All the great universe was a realm ruled by magic and gods.

But no more. Today, we—the heirs of the Indians' hunting grounds—are no longer earthbound. We are reaching out into space . . . out to the moon and Mars . . . out to the farthest reaches of our solar system.

The spearhead of this great American adventure is the National Aeronautics and Space Administration. Its scientists and engineers are leading the way. They work in the van of scientific progress . . . and history.

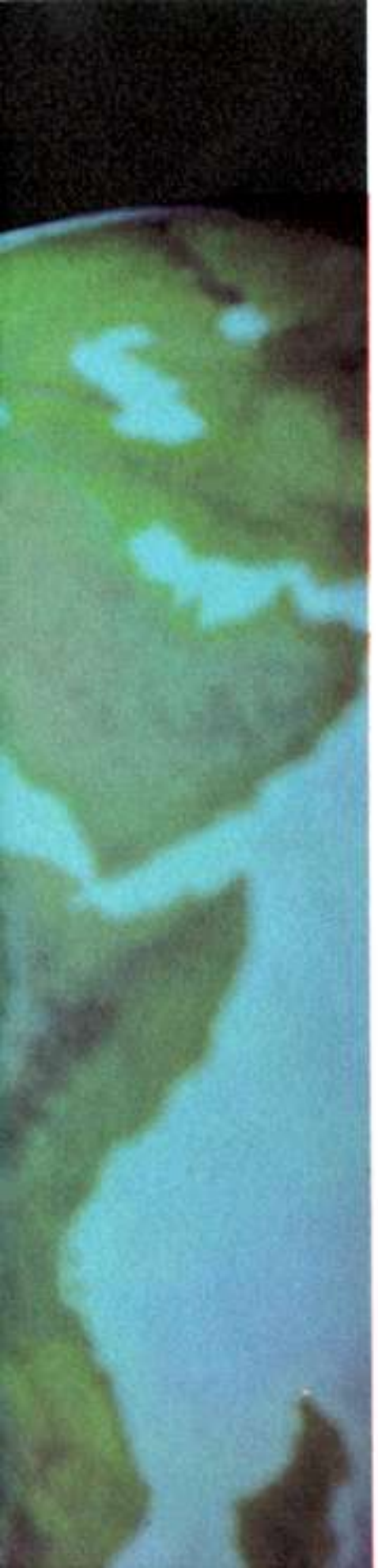
NASA leads U.S. ventures into space

Congress has authorized NASA
to direct and implement U.S. research efforts in aeronautics
and the exploration of space
. . . for peaceful purposes
. . . and the benefit of all mankind

The National Aeronautics and Space Administration leads the Nation's effort to find, interpret and understand the secrets of nature as they are revealed in the laboratory of space, and to extend the form of life found on earth to other planets.

NASA's space sciences program—including satellite and space probe launchings—will give us a deeper knowledge of the universe, our earth and nearby space, the moon and planets, interplanetary space and distant galaxies.

This deeper understanding and knowledge will ultimately bring the power to predict, to direct and to control the forces of nature and our own destiny.



The excitement, the importance, and the scope of the NASA are apparent from our enabling act. The following quotes are taken from the National Aeronautics and Space Act of 1958.

"The aeronautical and space activities of the United States shall be conducted so as to contribute materially to one or more of the following objectives:

The expansion of human knowledge of phenomena in the atmosphere and space;

The improvement of the usefulness, performance, speed, safety, and efficiency of aeronautical and space vehicles;

The development and operation of vehicles capable of carrying instruments, equipment, supplies and living organisms through space;

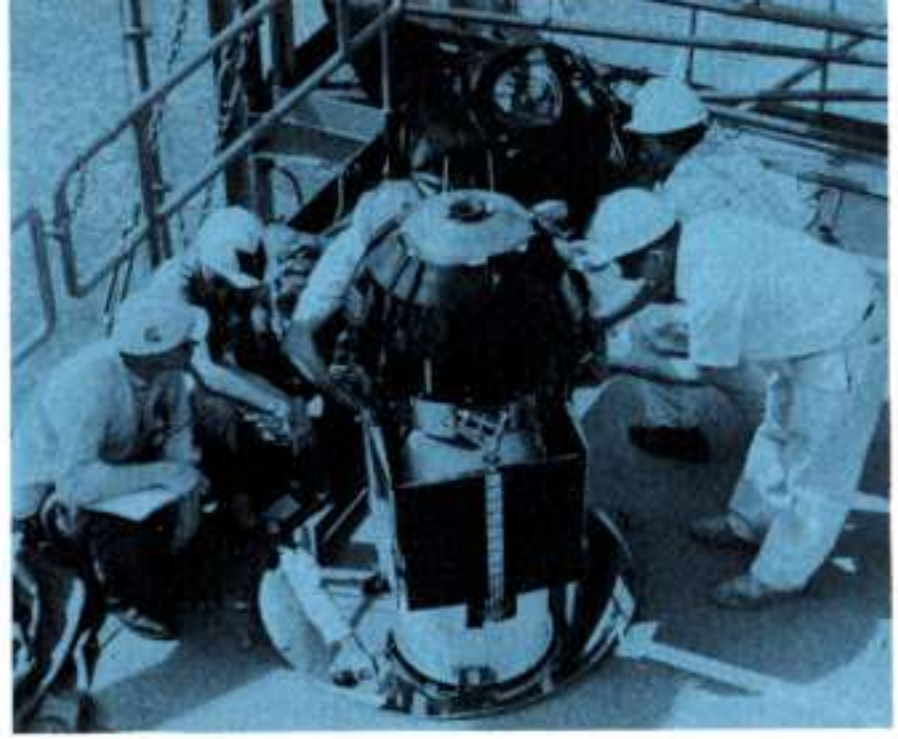
The establishment of long-range studies of the potential benefits to be gained from, the opportunities for, and the problems involved in the utilization of aeronautical and space activities for peaceful and scientific purposes;

The preservation of the role of the United States as a leader in aeronautical and space science and technology and in the application thereof to the conduct of peaceful activities within and outside the atmosphere;

The making available to agencies directly concerned with national defense of discoveries that have military value or significance, and the furnishing by such agencies, to the civilian agency established to direct and control nonmilitary aeronautical and space activities, of information as to discoveries which have value or significance to that agency;

Cooperation by the United States with other nations and groups of nations in work done pursuant to this Act and in the peaceful application of the results thereof; and

The most effective utilization of the scientific and engineering resources of the United States, with close cooperation among all interested agencies of the United States in order to avoid unnecessary duplication of effort, facilities and equipment. . . ."

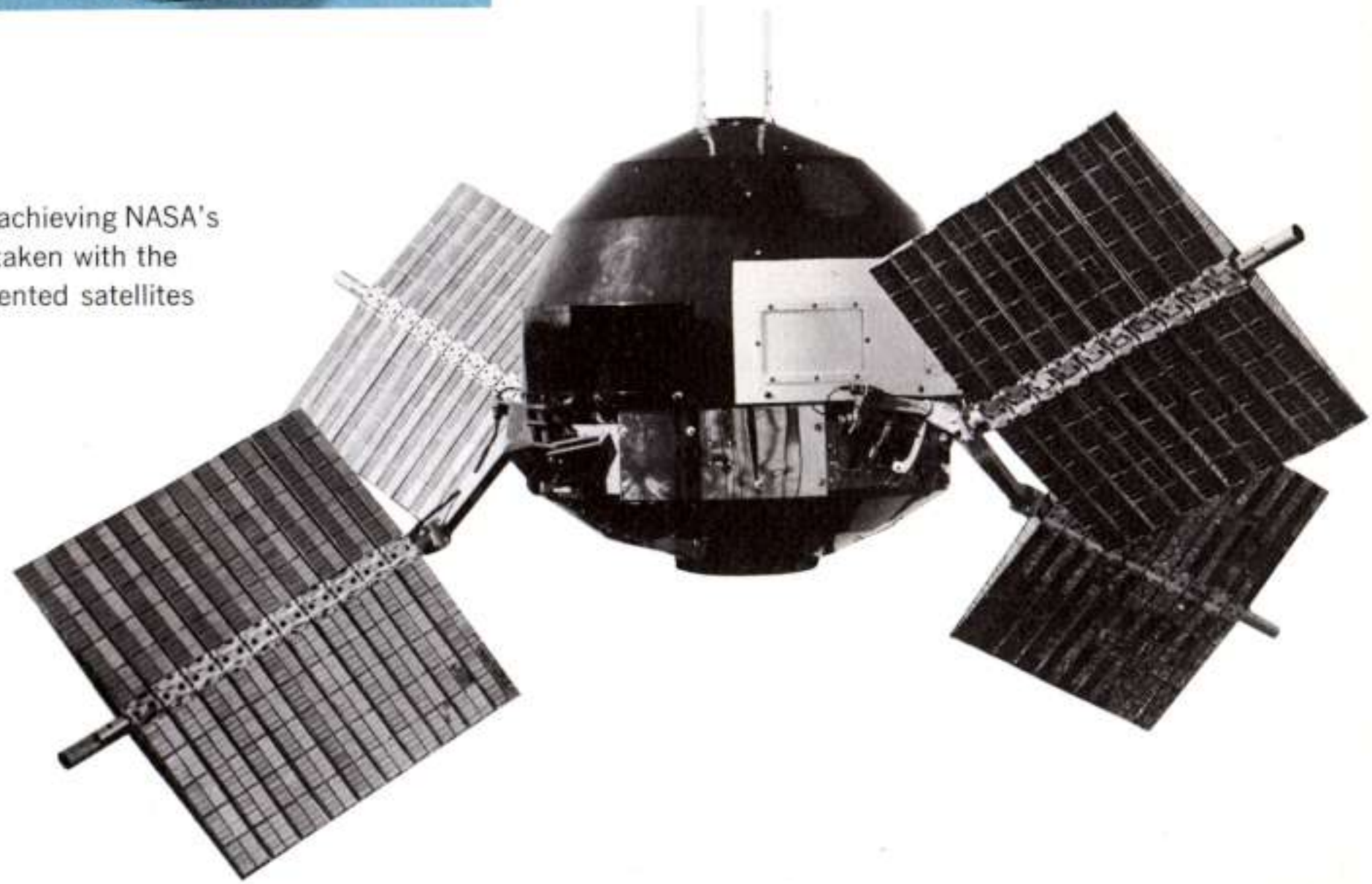


Payload of Explorer VI satellite being installed atop the third stage of rocket.

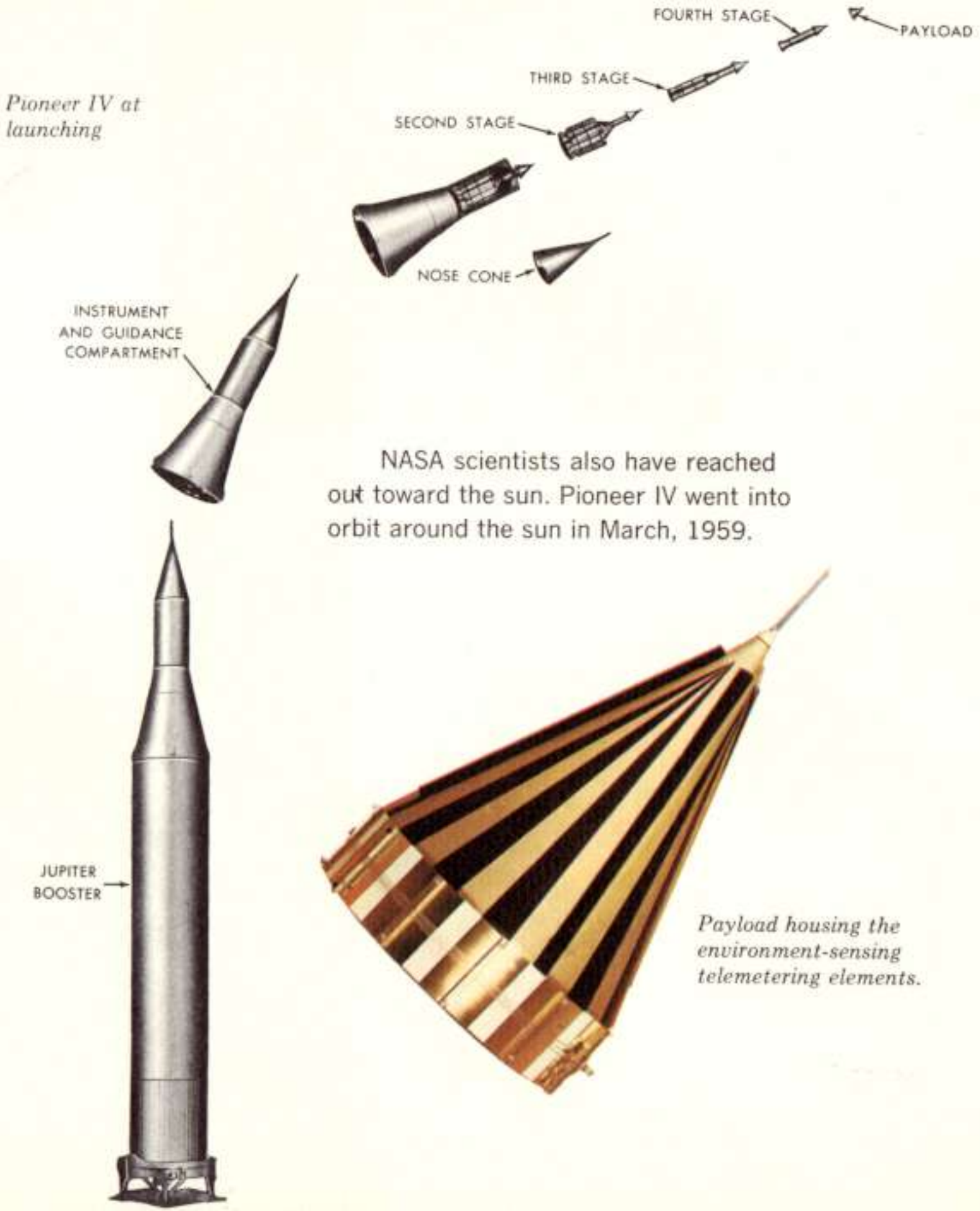
Explorer VI—the famed "Paddlewheel" satellite now in orbit—is an example of the technological strides that are being made by NASA.

Today

the first steps in achieving NASA's objectives are being taken with the aid of highly instrumented satellites and rockets.



Pioneer IV at launching



NASA scientists also have reached out toward the sun. Pioneer IV went into orbit around the sun in March, 1959.

Payload housing the environment-sensing telemetering elements.

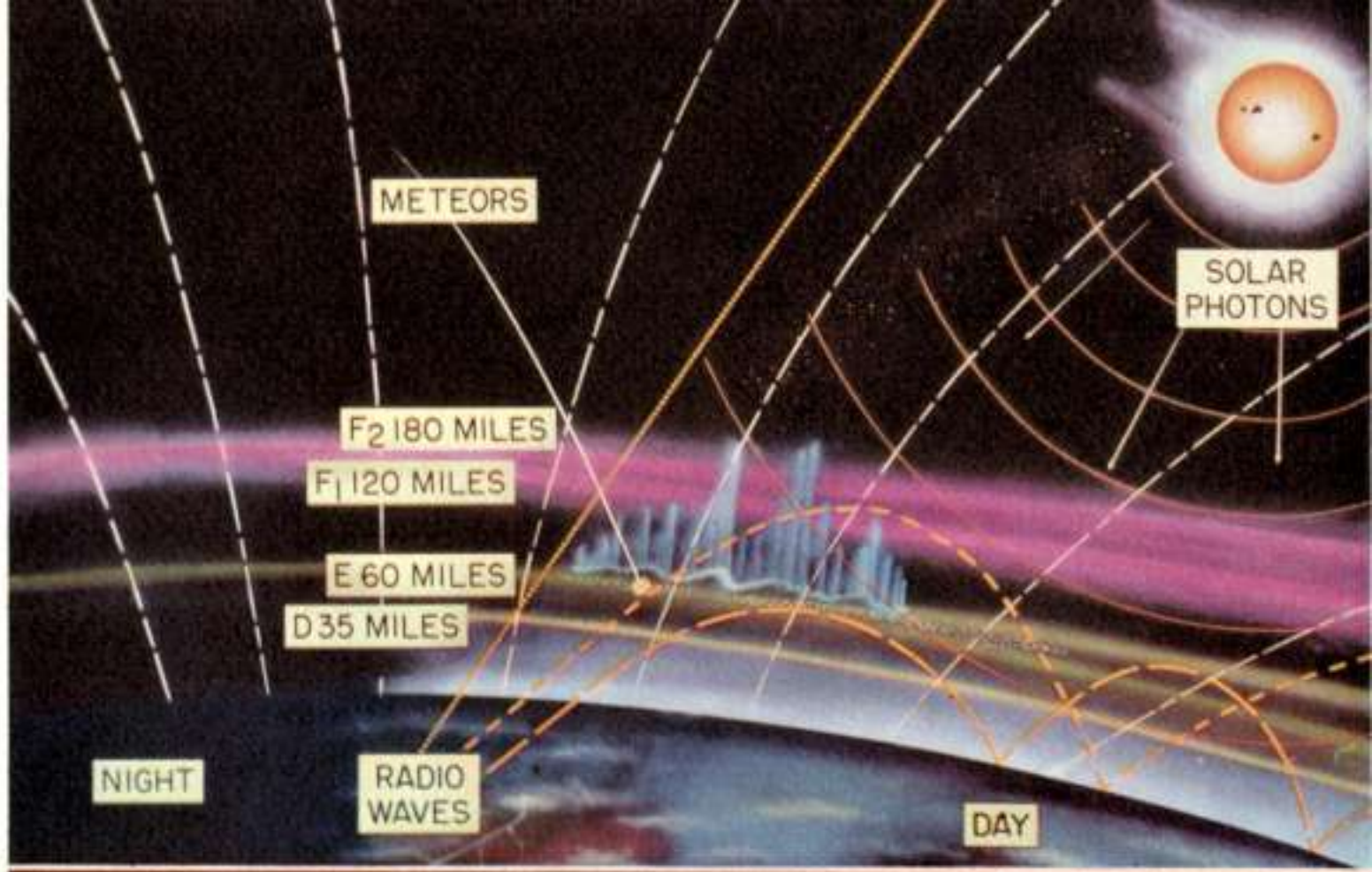
meantime,

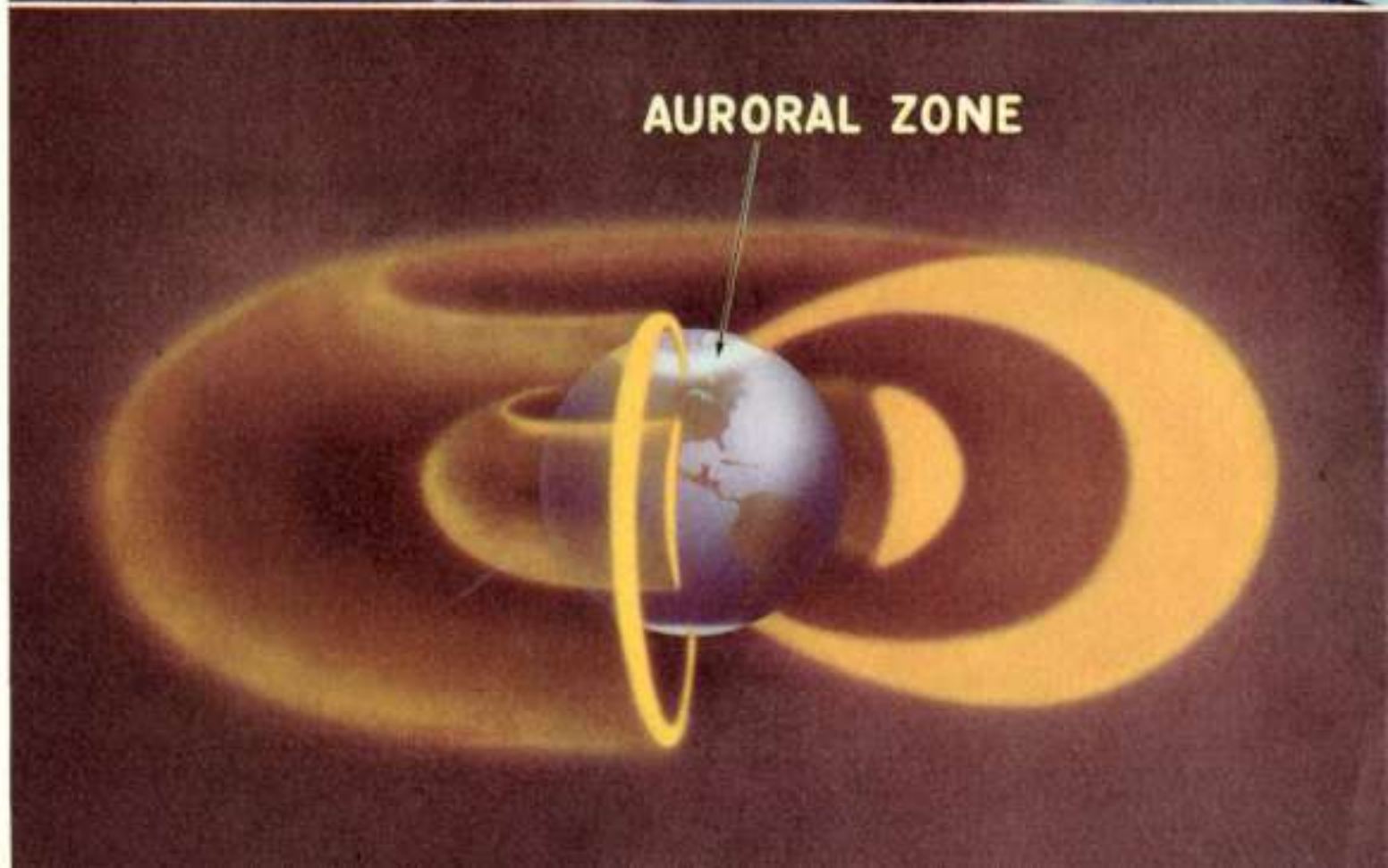
NASA scientists are learning much about the space around our earth . . . and around the moon and nearby planets.

Programs now underway are gathering quantities of data about such phenomena as . . .

the ionosphere . . .

energetic particles . . .





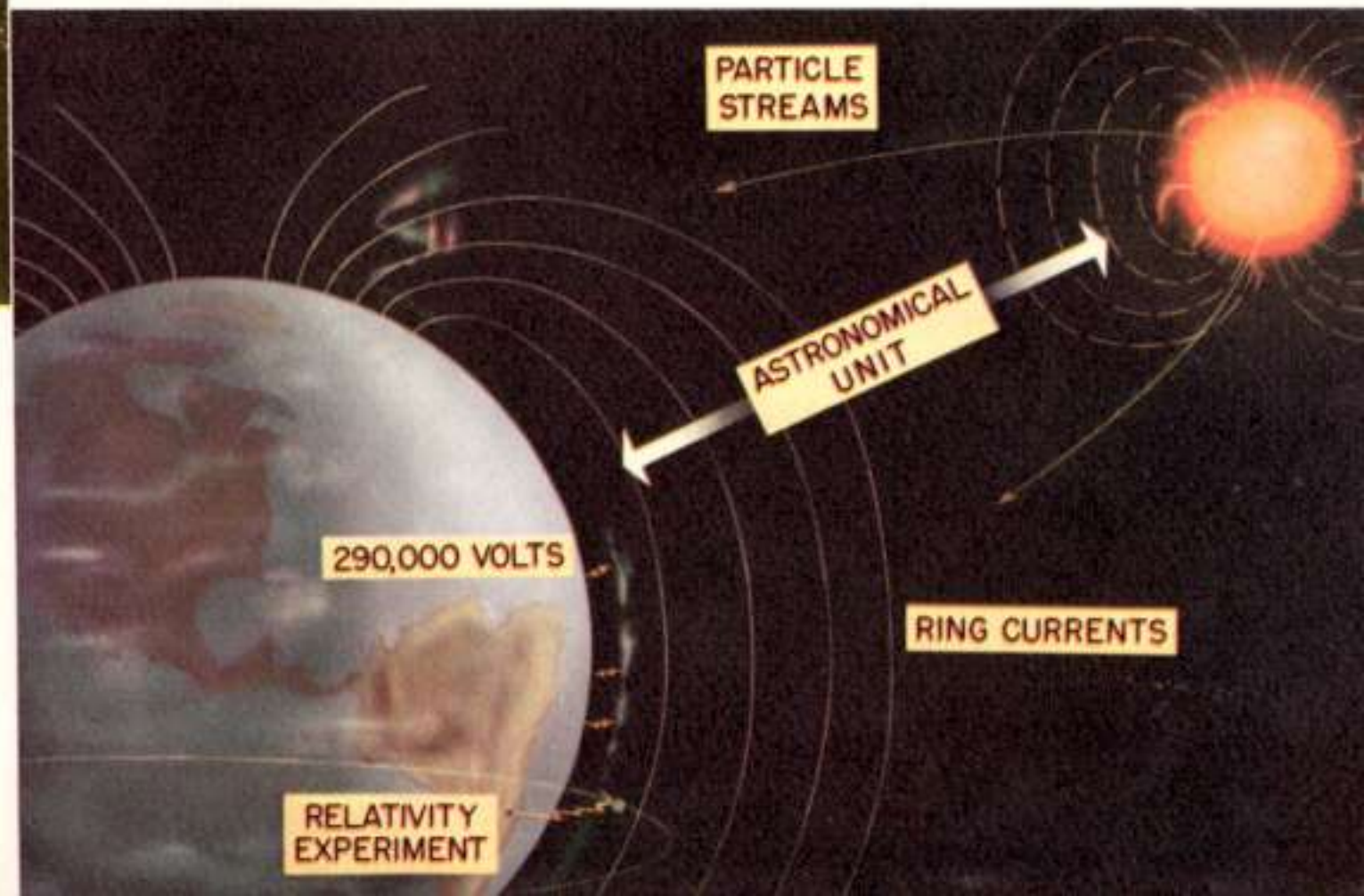
. . . the earth's atmosphere

magnetic and gravitational fields . . .

Such programs call for the creative work of scientists and engineers of every discipline.

Larger and more complex satellites and rockets are being readied for launching.

The results are paving the way for that historic time when man himself goes into space . . .

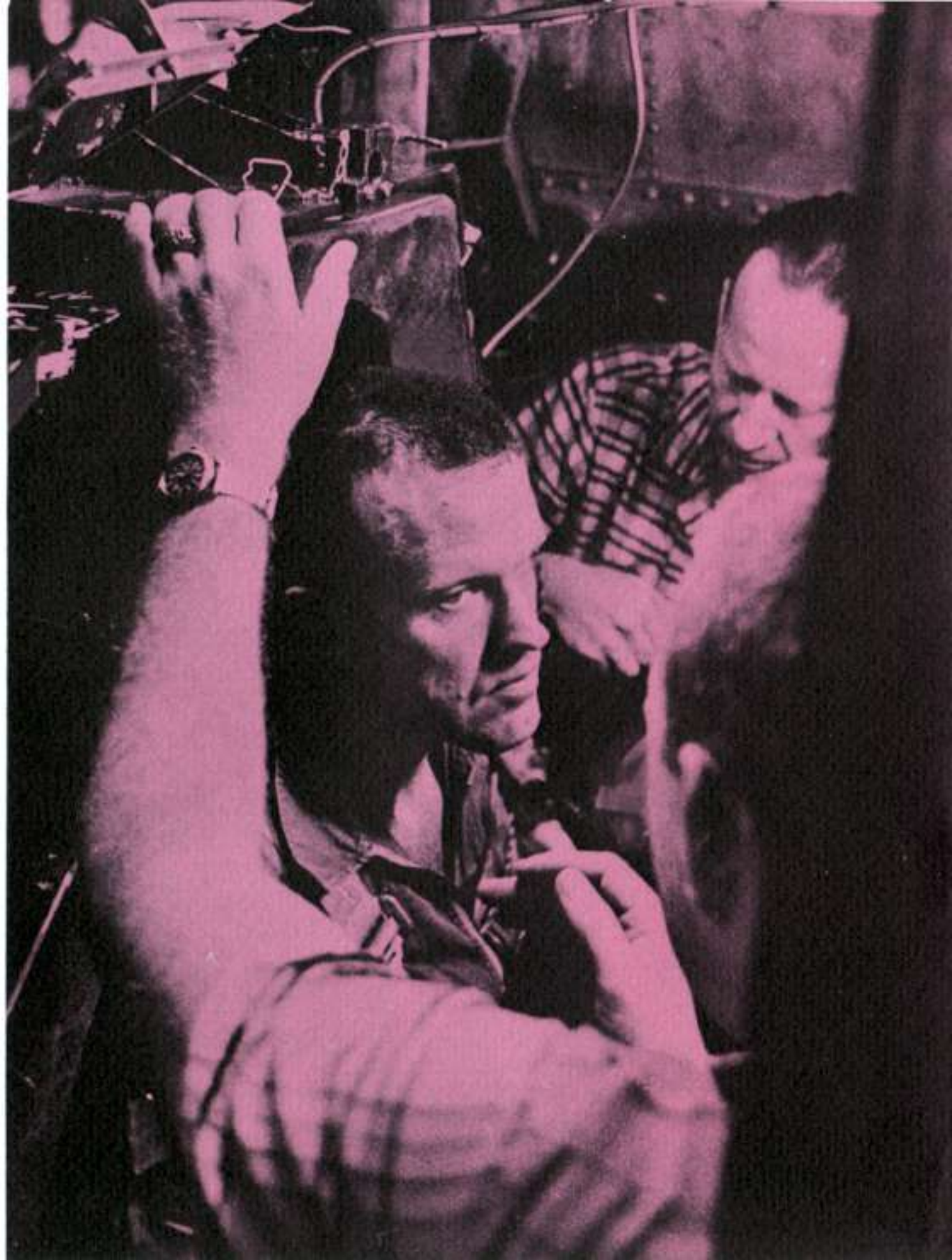


This is Project Mercury . . .

A scientific effort to put a man into orbit around the earth and bring him back safely.

Thousands of hours of thought and labor . . . millions of dollars . . . a world of care and planning . . . all are being poured forth to ensure success.

Mercury Astronaut being examined after completing ride on human centrifuge.



To go vastly greater distances . . . to send heavier payloads . . . NASA needs more powerful rockets than are available today.

NASA is developing these rockets:

CENTAUR

the first rocket to be fueled with liquid hydrogen—will enable NASA to put four-ton payloads into 300-mile orbits around the earth.

SATURN

the first clustered 1.5 million pound thrust booster—will enable NASA to put 15-ton payloads into orbits. Such a payload could be a manned space observatory.

NOVA

a single-chamber 1.5 million pound thrust engine now being developed—may be clustered in a manner like that illustrated to launch multi-ton space stations into obrit—or to send manned expeditions to the moon.

Space will yield many things to man in the coming decade.

He will use orbiting vehicles to help forecast more accurately the weather weeks ahead—and possibly he will find ways to control it.

He will use it to improve his communications. Satellites will be used to improve transmission of television, transoceanic phone calls, teletypewriter messages, even photographs

He will use space as an observation post. Camera-equipped satellites will map the earth and keep track of ships, spot icebergs, locate vessels in distress, and make other aerial observations.

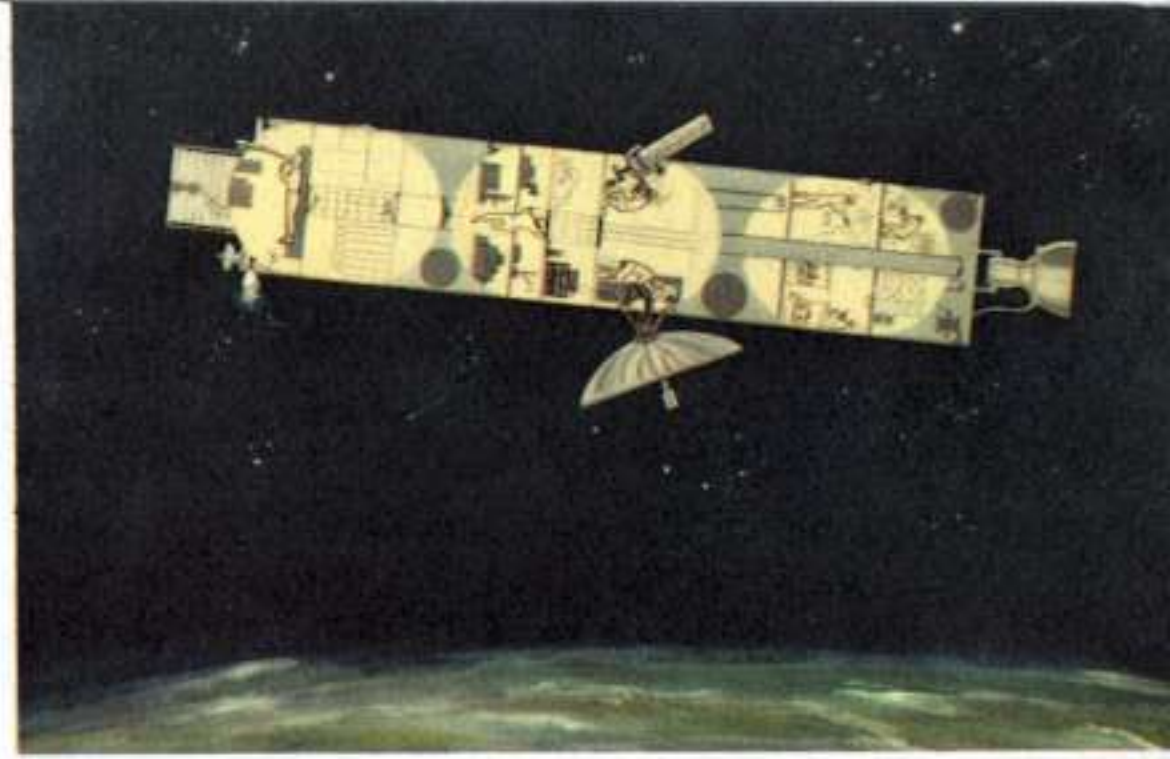
He will use space as a laboratory to probe into the universe's many secrets including the greatest secret of all—its creation. He will expand his travels into space, looking toward travel to the moon and nearby planets.

In all of these ventures NASA scientists and engineers will lead the way. This is their mission.

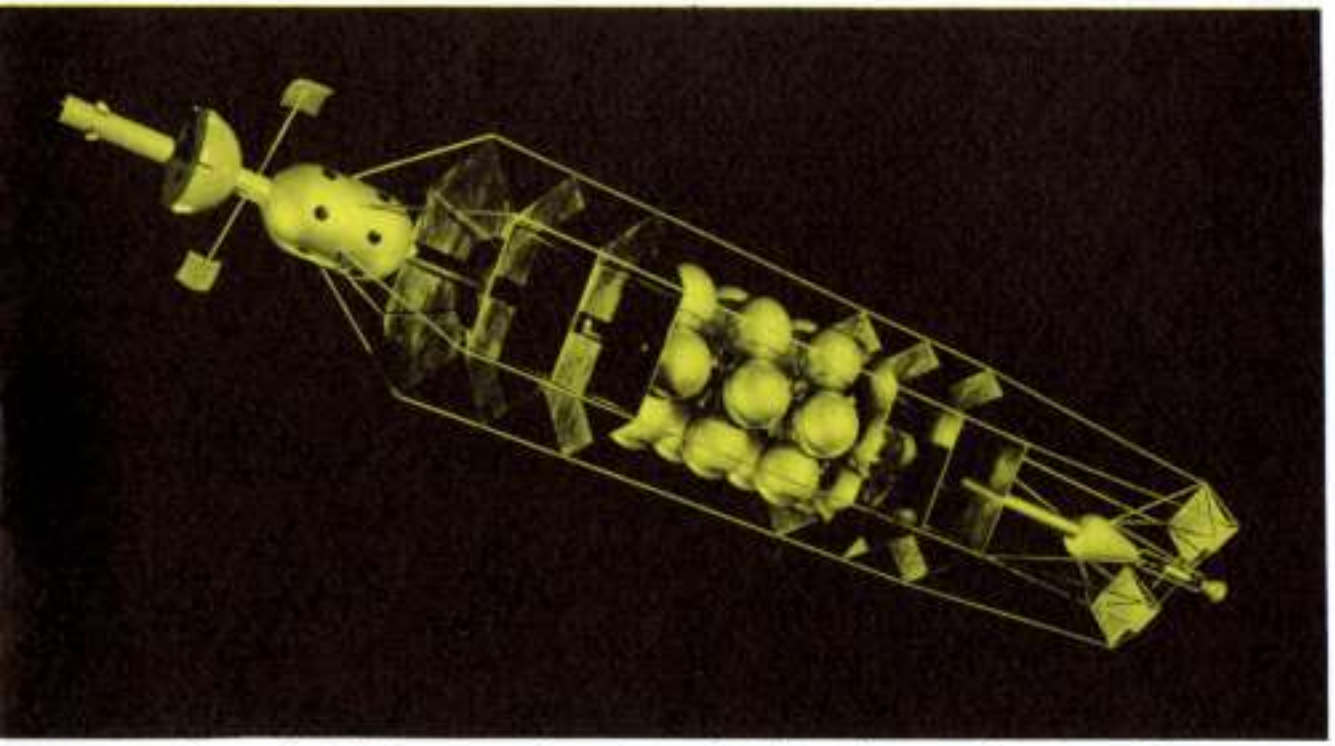
Still this will be only the beginning.

The development of ionic rockets . . . nuclear rockets . . . possibly photonic rockets . . . will enable man to explore the entire solar system in the years ahead.

And before the present decade ends, NASA telescopes operating from space observatories will see further into the cosmos than man has ever seen. New galaxy on new galaxy will come within the reach of our vision. And men will prepare to follow into the unknown.



Saturn space laboratory.



Hypothetical space craft equipped with nuclear rocket propulsion system.

Four-stage chemical-rocket-propelled space vehicle carrying eight-man crew.

NASA scientific and technological research is concentrated at five centers located across the United States from coast to coast.

Together they comprise the largest research organization in the Nation.

Here is the workshop of many of the world's leading scientists and engineers.

NASA's broad sweep of expanding laboratories and technical facilities provide its scientists and engineers with the most modern equipment available, much of it unobtainable elsewhere.

Engineer wearing protective suit checks rocket motor model being tested in wind tunnel.

Multiple axis spin test inertia facility

Moreover, NASA scientists and engineers are supported in their endeavors by highly skilled technicians and well-staffed clerical offices.

An atmosphere of intellectual excellence and dedicated research prevails.

NASA scientists and engineers are doing the job . . .

At the Goddard Space Flight Center, Washington, D. C.

At Wallops Island Test Station, Wallops Island, Va.

At Langley Research Center, Hampton, Va.

At Lewis Research Center, Cleveland, Ohio

At the Flight Research Center, Edwards, Calif.

At Ames Research Center, Mountain View, Calif.

Study of jet-afterbody interaction effects

Ion accelerator used by NASA scientist

Also . . .

NASA operates tracking and communications centers throughout the world. NASA scientists and engineers participate in rocket and satellite launchings at all of the nation's test ranges including NASA's own at Wallops Island.

NASA directs the large amount of research and development performed for it by private industry, educational institutions and the military services.

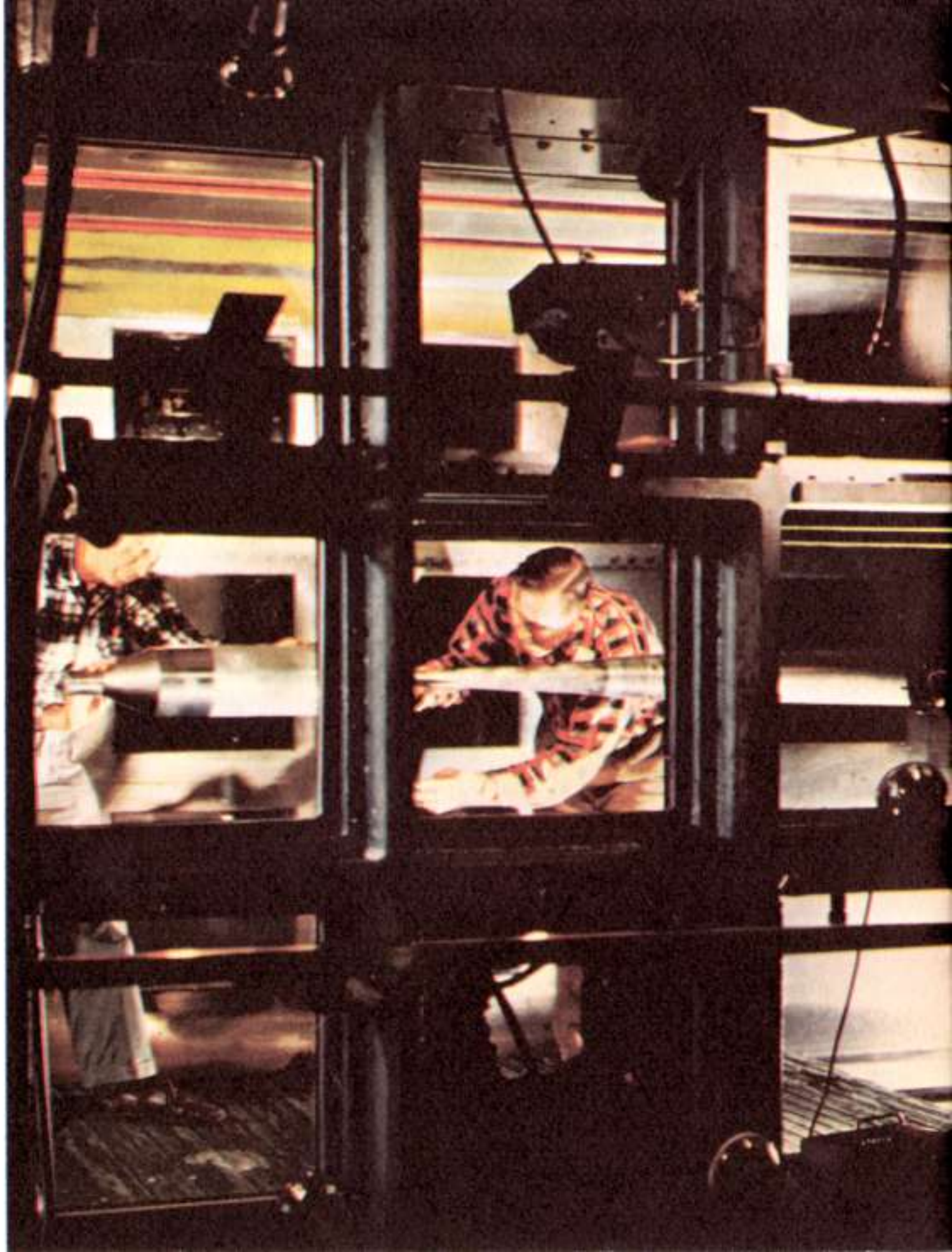
This is an invitation

to you to join us at NASA in carrying out this greatest and most challenging assignment of our generation.

College graduates with inquiring scientific minds . . . creative minds . . . will in the decade ahead participate in the making of scientific history.

NASA is now appointing college graduates to its scientific and engineering staff. The best in America is needed. The best in America is sought.

8-foot transonic wind tunnel at NASA Langley Research Center.



Today at NASA professional opportunities await college graduates who have majored in:

Science

Astronautics, Physics, Electronics, Chemistry, Metallurgy, Mathematics, Astronomy, and Geophysics

Engineering

Aeronautical, Mechanical, Electronic, Electrical, Chemical, Metallurgical, Nuclear, Ceramic, Civil, Engineering Mechanics, Engineering Physics.

For such graduates, an appointment to NASA's growing staff offers:

Rapid Professional Advancement—NASA is expanding at a rapid rate. You will have a chance to grow with a dynamic organization.

Early Recognition—NASA policies assure that its scientists and engineers receive personal professional credit for their work regardless of seniority. Because of these policies and the worldwide importance of NASA projects, international reputations may be made early.

Rapid Salary Advancement—NASA provides rapid salary increases based on the individual's contributions.

Travel—NASA scientists and engineers attend professional meetings in the United States and overseas.

Graduate Study—NASA pays the tuition and fees of its scientists and engineers as well as continuing their full salaries while they are undertaking graduate study. NASA projects may be used as the basis for master's and doctor's dissertations.

Choice of Area—NASA offers its scientists and engineers a wide choice of area in which to live. NASA facilities are located from coast to coast.

To investigate your opportunities at NASA . . .

Set up an appointment with your College Placement Officer to meet a NASA representative.

Or direct your inquiry to the Personnel Director at any of these NASA research centers:

- NASA Langley Research Center
  Hampton, Va.
- NASA Ames Research Center
  Mountain View, California
- NASA Lewis Research Center
  Cleveland, Ohio
- NASA Flight Research Center
  Edwards, California
- NASA Goddard Space Flight Center
  Washington 25, D. C.
- NASA George C. Marshall
  Space Flight Center
  Huntsville, Alabama

If the manifold possibilities of space

are to be realized for the benefit of mankind,

it is imperative that this country lead the

way. We must not fail to meet the challenge.

Administrator NASA

NASA INVITES YOU TO TAKE PART IN TOMORROW . . . TODAY

. . . for peaceful purposes

and the benefit

of all mankind.

National Aeronautics and Space Administration