U.S. Plans Probe Into Neighboring Space This Year

(Editor's Note: Solving the mysteries of space with men and celestial machines remains the nation's major scientific challenge in this new Year. There also will be more research into a strange new kind of light, into the deep enigma of what makes human and vegetable life tick, and more probes into other scientific spheres. In the following dispatch a United Press International Science writer reports on the thresholds man will approach this year.)

By JOSEPH L. MYLER

United Press International

Washington – (UPI) – In 1963 man should learn more about the earth, moon, planets, sun, and himself than he ever knew before.

The United States plans this year to launch two geophysical observatories to study the earth from space, three moon probes to take the first closeup television pictures of the lunar surface, two orbiting observatories to investigate solar eruptions, and many a scientific satellite to glean more knowledge about space near the earth..

This year also will see the first cooperative space ventures by Russia and the United States.

Scientists all over the world, meanwhile, are pushing efforts to crack the genetic code of life, to harness H-bomb reactions for peacetime power, to put a strange new kind of light to work in communications and industry, and to solve the remaining mysteries of photosynthesis, the process by which nature manufactures food and fiber from sunlight, carbon dioxide, water, and soil.

Life on Venus

Spacecraft already aloft should provide some answers to the question whether life can exist on Venus, what Mars looks like to spaceborne television cameras flying by, and what hazard, if any, is posed to man's space machines by the tiny bits of cosmic dust and debris which swarm in the solar system.

America's Mariner 2, the 447-pound spacecraft which flew past Venus last Dec. 14, has reported more information than was ever available before about the brilliant planet and its space environment.

Information still to be translated should indicate whether Venus is cool enough and whether it has water enough to support life like Earth's.

Russia's Mars probe, launched last Nov. 1, should provide science with new information about the red planet. It is equipped to take television photographs of Mars for eventual transmission to earth.

America's Explorer 16, launched Dec. 16 to study tiny grains of meteoric matter near the earth, will report this year whether there is enough of this material in the space trails to endanger astronauts and their craft.

View Our Planet

Two U.S. satellites scheduled for 1963, known as Ogo and Ego, will gaze at the earth instead of objects farther out in space. Their jobs: to give science a better idea of the exact shape and size of our planet and its gravitational and magnetic characteristics.

Two solar observatories will seek clues from the surface of the boiling and erupting sun to the origin of charged particles and ionized molecules which throng in planetary space. They may help man to find means of forecasting the gigantic solar flares which eject radiations dangerous to astronauts.

The lunar studies will be made by three Ranger spacecraft carrying clusters of television cameras designed to transmit moon pictures up to the moment of impact. They will show objects as small as a beach umbrella.

Scientists hope from these pictures to map safe landing areas on the moon for the Apollo astronauts.

These flights by the 750-pound Ranger spacecraft will, if they succeed, be the most spectacular space projects planned by the United States in 1963.

One 1963 Flight

America has only one manned flight definitely on the 1963 space calendar. This is the one-day orbital trip planned for Astronaut Leroy Gordon Cooper, Jr., aboard a Mercury capsule in April.

The Russians already have made far longer journeys in space than the Cooper mission. If Cooper's flight accomplishes all expected of it, the United States will attempt no more manned space jaunts until 1964 when it launches the first trips in the two-man Gemini spacecraft.

With Gemini, in 1964 and 1965, the United States will train astronauts in the rendezvous techniques – the coupling of craft in space – which will be used in subsequent Apollo missions to the moon. Toward the end of this year a Gemini craft may be put through an unmanned suborbital flight.

The United States, meanwhile, will send up more communication and weather satellites. These will include Syncom, an advanced communication satellite which will be put in an orbit, 22,300 miles out in space, where it will seem to hover. Satellites in such "fixed orbits" theoretically could cover the whole earth if properly spotted above the equator.

First Nimbus

Additional Tiros weather satellites will be launched, but the big event of 1963 in this field will be the lofting of the first Nimbus. Nimbus will swing around the earth on a pole-to-pole orbit, and its instruments – unlike Tiros' – will always point down toward the planet.

On Nimbus, the weather bureau pins its hopes for a dependable, routinely operating satellite weather system.

Also in 1963 the United States will launch Echo 2, a bigger and more rigid version of the Echo I and radio mirror launched in 1961 and still in orbit.

Echo 2, as high as a 13-story building, will provide a reflecting surface against which Soviet and American scientists will bounce radio signals for the first space communications between the two nations.

This year, too, will see the final organization of a corporation authorized by the United States to develop a global system of space communications. Russia will participate in this system if she wants to.

Try H-bomb Control

In non-space fields scientists are striving to control H-bomb reactions for power. They do not expect immediate success. But "impressive" progress was recently reported by the Oak Ridge National laboratory of the Atomic Energy commission, there is enough hydrogen fuel in the earth's waters to give man an inexhaustible supply f power if he ever manages to harness the reactions involved.

Scientists have discovered that the genetic code, which directs the activities of living organisms and controls heredity, is written in a chemical compound called DNA. Mastery of the code and how to manipulate it would give man the power to create new beings and direct their development. He might even control his own heredity.

Scientists have partially cracked the code. But the more progress they make, the more difficulties they encounter. This year may see some of the difficulties removed.

New Laser Light

A couple of years ago scientists created a new kind of light with an instrument called the Laser. Laser light is all one frequency and not the jumble of wavelengths encountered in ordinary light. Laser light may be transmitted through space in extremely tight pencil-like beams capable, like radio, of carrying intelligence.

Focused at close quarters, Laser light can burn holes through diamond, drill through steel, and perform delicate masterpieces of surgery. Theretically it might develop into a weapon against missiles, or into a means of transmitting power from spacecraft to spacecraft.

In space communications, it should have many thousands of times the capacity of radio. One Laser potentially could handle more information than 25,000 television stations operating at once.

This year may produce practical means of creating steady sources of Laser light and of "modulating" light beams to carry messages.

Every year sees a bit more of the mystery of photosynthesis stripped away. If man could copy, and improve upon, this process of nature's he could multiply the resources needed to maintain the earth's evergrowing populations. Major progress toward this end is possible in 1963.

RUSSIA TO COOPERATE — U.S. space goals and instruments that will be used to achieve them are shown in this artist's conception. Besides sending up sounding rockets and observatories, U. S. also will have first cooperative space venture with Soviet Union in 1963. (UPI)

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'Duck Preview' Day Activities Slated

Eugene – Representatives of all major fields of study will be available to interested high school seniors during "Duck Preview" at the University of Oregon Jan. 26.

The seniors will be given the opportunity to attend sessions in the department or school of their first and second preference during the afternoon. At this time, course offerings, degree programs, and professional opportunities in the various fields will be outlined by faculty members.

Special tours will take the visitors to the science building, school of music, school of architecture and allied arts, library, University theater, museum of art, ROTC department, Erb Memorial Student union, freshman dormitories and the Honors college.

The office of student affairs will have an information center with representatives of the admissions office, scholarship committee, dormitory office, dean of women's office, dean of men's office, co-operative housing, panhellenic and inter-fraternity councils available. The University Counseling Center also will be represented.

Guest speakers and student entertainment will highlight the luncheon to be held in the Erb Memorial Student union.

IT'S YOUR LAW

Respect for Law Makes Democracy Live

The following article was prepared by the Oregon State Bar information service as a public service. Persons in need of legal advise are urged to consult an attarney with all of the facts since a slight change in facts may greatly alter a case.

JURY DUTY

One of these days – perhaps soon – you may get a notice telling you to report for jury duty – and to "fail not." In serving, you share one of the most solemn duties known to our democracy.

Some people try to get out of jury service. It may be inconvenient or unpleasant. Yet, when you are put on a jury you should think of this as a chance to help make good one of the promises of our Constitution – trial by jury. Say the following to yourself:

"My forefathers wrested my right to serve as a juror from tyrants.

"Under our law no one's life, liberty, or property can be taken without due process of law.

"Trial by jury is our basic right. All who seek their day in court should have a fair hearing. They will get it from me.

"I will not ask to be excused from jury service except in an emergency.

"On my oath I will well and truly try each case before me, and a true verdict render under the law given me by the judge and the evidence at the trial without fear, favor, or hope of reward.

"I will listen closely, with open mind to all of the testimony, instructions and arguments. I will not make up my mind until all the facts are in and the judge has instructed the jury on the law.

"I will search for the truth regardless of wealth or poverty, friendship or enmity, of any party or witnesses.

"To someone my decision may mean the difference between freedom or imprisonment, poverty or wealth.

"Justice, once but a dream, is a reality when I, as a juror, do my full duty. No act of mine shall bring shame to our system of liberty under law."

4-H NEWS

Central Point Porkies

The fourth meeting of the Central Point Porkies 4-H club was held in the Central Point gymnasium. Plans for a window display for 4-H week were discussed. The next meeting will be held at the home of Eldred Charley Feb. 11.

John Swartsfager, Reporter

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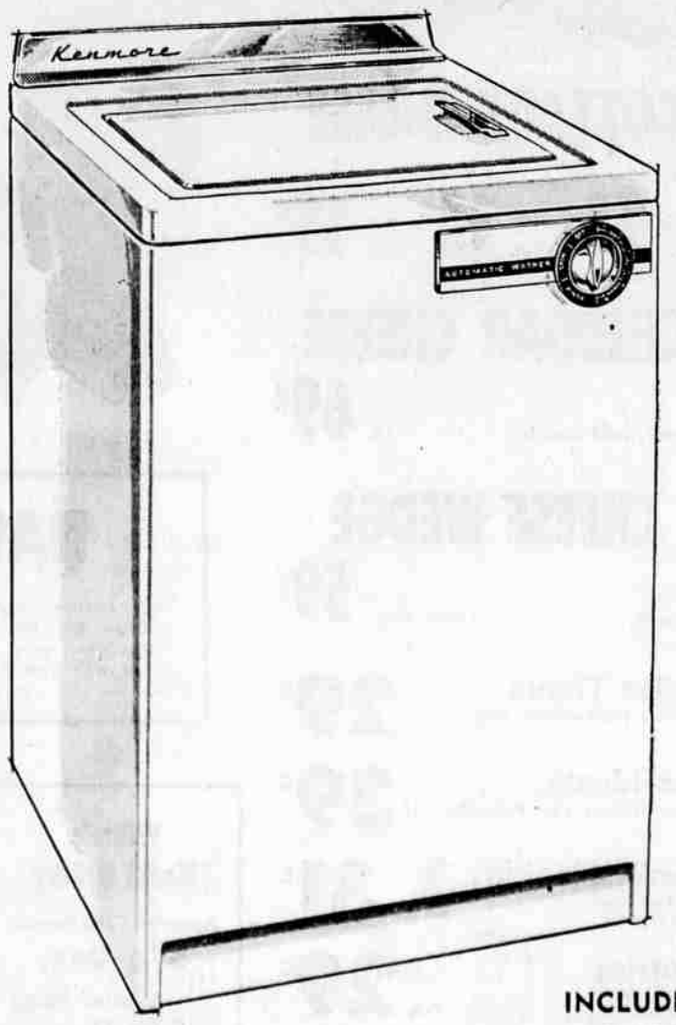

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