GENERAL SCIENCE

U. S. Science Goals

➤ THE UNITED STATES made the wrong choice when it picked manned space flight as the main event in the current world-wide "scientific Olympic Games," the director of the Oak Ridge National Laboratory, Oak Ridge, Tenn., asserts.

Dr. Alvin M. Weinberg believes that "most Americans would prefer to belong to the society which first gave the world a cure for cancer than to the society which put the first astronaut on Mars."

He objects to concentrating American resources on space flight "on three grounds —hazard, expense and relevance."

Knowledge of radiation hazards in space is incomplete and uncertain, but space is known to be "a much more hostile environment than we had suspected even five years ago," Dr. Weinberg says.

He does not regard the $20 billion to $40 billion estimate of the cost of a round trip to the moon as realistic. He pointed out that ten years ago, experts estimated that a decade's work and the spending of $1 billion would result in nuclear-powered aircraft.

"As it turned out, after ten years and an expenditure of $1 billion, we have words, not nuclear airplanes, flying."

As for relevance, Dr. Weinberg prefers "issues which have more bearing on the world that is part of man's everyday environment" to either manned space flight or high-energy physics, the other expensive "spectacular" now getting major United States scientific attention.

Some of the alternative areas he suggests are molecular biology and the synthesis of living matter from non-living matter, uses of nuclear energy, water shortages, atmospheric pollution and chemical contamination of the biosphere.

The country's overall scientific strategy should first be extensively debated. Then "we should make a choice, explain it, and . . . have the courage to stick to a course arrived at rationally."

Writing in Science, 134:161, 1961, Dr. Weinberg contends that today's "Big Science" is afflicted with "journalitis, moneyitis, (and) administratitis."

Big-scale science needs wide support and thrives on publicity. Scientific and technical issues are argued in the popular press, rather than the scientific press, "or in the congressional committee room rather than in the technical-society lecture hall." Dr. Weinberg maintains that "the line between journalism and science has become blurred."

With more money available to science, scientists are in "a natural rush to spend dollars rather than thought."

Because of its growth, Big Science is becoming dominated by administrative bosses who do not understand science.

Dr. Weinberg also notes that "Big Science can ruin our universities" by diverting them from primary aims and turning professors into "administrators, housekeepers, and publicists."

Big Science may lead the country to financial ruin, Dr. Weinberg states. Ten percent of the annual Federal budget, or about one and six-tenths percent of the gross national product, now goes for research and development. At the present rate, the amount will double every seven years. Since the gross national product is doubling only at 20-year intervals, "we shall be spending all of our money on science and technology in about 65 years" unless steps are taken to reduce expenditures.

Dr. Weinberg suggests settling on a figure "something less than one percent of the gross national product" for Federal support of non-defense science, for a 15-year period.

"It is obvious that we shall have to devote much more attention than we now do to making choices between science projects in very different fields," he states.

• Science News Letter, 80:87 August 5, 1961

EDUCATION

Foundation Grant Aids Oxford Science Program

➤ A $250,000 GRANT from the Ford Foundation will help Britain in its plans for training more scientists.

The money goes to Oxford University for teaching and research fellowships at St. Catherine's, a new college stressing the natural sciences, set to open in October, 1962.

Total cost for the college is estimated at $7,300,000. Most of the money will be raised from public and private British sources.

As many as half of the 400 student enrollments and more than half of the available fellowships at St. Catherine's will be reserved for science workers. In line with Oxford tradition, however, students in different fields will be mixed to establish closer working relationships between the sciences and the humanities.

Two years ago, the Foundation granted $1,000,000 and British sources contributed $9,000,000 to establish Churchill College at Cambridge University. Churchill also specializes in the sciences.

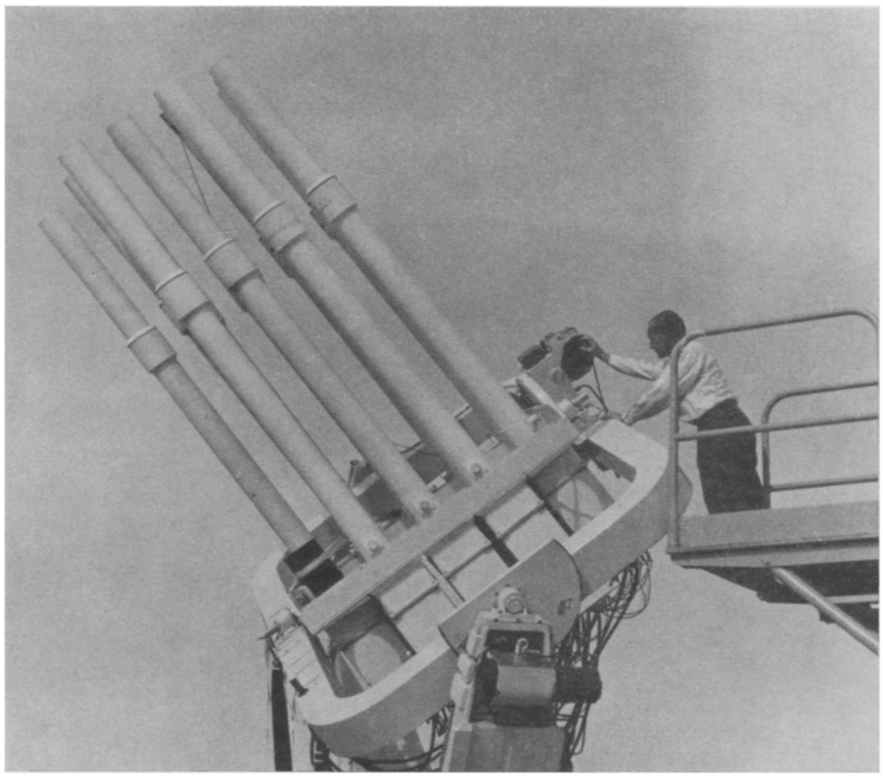
• Science News Letter, 80:87 August 5, 1961

TECHNOLOGY

Planet Pictures Made In Broad Daylight

➤ A NEW GIANT camera has taken pictures of the planets Venus and Jupiter in broad daylight. The camera, which has also photographed missiles, satellites and stars, consists of 19 long-barreled five-inch refracting telescopes. Planetary images, not visible to the eye during the day, were transmitted to an indoor screen and photographed with a precision-plate camera. The camera was built for the U.S. Air Force for tracking missiles and satellites at extreme distances in any kind of light.

• Science News Letter, 80:87 August 5, 1961



SHOOTING PLANETS—This is not a gun but a 19-barreled telescope for photographing planets during bright daylight.