look for artificial earth satellites in any given locality. *Simplified Satellite Prediction From Modified Orbital Elements* may be obtained for $1 from the Publications Office, National Academy of Sciences, Washington 25, D.C.

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An exhibit of paintings, drawings, and prints illustrating "Art in Science" is being displayed at the International Business Machines Gallery of Arts and Science in New York, 11–26 November. The exhibit, sponsored by the *Scientific American,* is composed of covers and illustrations drawn for the magazine. The American Federation of Arts assisted in the preparation of the exhibit.

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Apparatus has been developed at the National Bureau of Standards by F. E. Washer that makes possible the rapid, accurate visual testing of high-precision lenses, such as those used in airplane cameras and telescopes. Spherical and chromatic aberration are determined on an optical T-bench equipped with nodal slides and angle-measuring telescope. From the resulting data, corrections are easily made for out-of-focus effects.

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An explanation of what cosmic rays are and how they were discovered will be shown on television again when "The Strange Case of the Cosmic Rays" is repeated on the National Broadcasting Company at 6 P.M. on 23 November as a part of the Bell System Science Series.

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The National Science Foundation has issued a compilation of the Soviet scientific and technical journals available in English translation in the United States. There are now in print 53 English editions of Russian journals, four extensive series of translated Russian abstracts of scientific papers, and four series of partial translations of important Russian journals. The number of translations of complete journals supported by the National Science Foundation is 31.

Grants, Fellowships, and Awards

Atomic Energy. Graduate students who wish to major in subjects within the field of nuclear science and engineering are eligible to apply for special Atomic Energy Commission fellowships to support such studies. Up to 150 appointments will be made for fellowships which begin in the fall of 1959. More than 40 universities in the United States offering the required courses accept students under this program.

Basic stipend for first-year students is $1800 for 12 months. Intermediate-year fellows receive $2000, and terminal-year appointees, $2200. An additional allowance of $500 per year is made for a wife and a maximum of two dependent children, and tuition, fees, and travel allowances are provided.

The Oak Ridge Institute of Nuclear Studies, which administers these fellowships for the commission, has established an application deadline of *2 January 1959.* Brochures and application materials are available on request from the Nuclear Science and Engineering Fellowship Office, University Relations Division, Oak Ridge Institute of Nuclear Studies, Box 117, Oak Ridge, Tenn.

Biological Sciences. The Division of Biological and Medical Sciences of the National Science Foundation has announced that the next closing date for receipt of basic research proposals in the life sciences is *15 January 1959.* Proposals received prior to that date will be reviewed at the spring meetings of the foundation's advisory panels and disposition will be made approximately 4 months following the closing date. Inquiries should be addressed to the National Science Foundation, Washington 25, D.C.

Teacher training. Stanford University, with the financial support of the Shell Companies Foundation, is again making available to secondary-school chemistry, physics, and mathematics teachers in the United States and Canada 50 Merit Fellowships which provide an opportunity for advanced study. The Shell program makes it possible for a teacher to attend a Stanford University summer session with practically no cost to himself. The fellowships provide full tuition, board, and room; textbook and travel allowances; and a cash stipend of $500. The total value of a fellowship is approximately $1250 for the 8-week summer session. The application deadline is *1 January 1959.* For information, write to: Dr. Paul DeH. Hurd, Coordinator, Shell Merit Fellowship Program, School of Education, Stanford University, Stanford, Calif.

Travel grants. The National Science Foundation will award individual grants to defray partial travel expenses for a limited number of American scientists who wish to participate in the following international congresses: International Congress of the History of Science, Barcelona, August-September 1959; International Sociological Association Congress, Perugia, September 1959; International Union for the Scientific Study of Population, Vienna, August-September 1959; and the Pan–African Congress on Prehistory, Leopoldville, August 1959.

An attempt will be made to have the grants approximate round-trip air tourist fare between the scientist's home institution and the location of the meeting. Application blanks may be obtained from the National Science Foundation, Washington 25, D.C. Completed application forms must be submitted by *1 February 1959.*

Scientists in the News

EUGENE P. WIGNER, Thomas D. Jones professor of mathematical physics at Princeton University, is to receive the Atomic Energy Commission's Enrico Fermi Award. The $50,000 award will be presented to Wigner on 2 December for "contributions to nuclear and theoretical physics, to nuclear reactor development, and to practical applications of atomic energy."

The presentation ceremony is being held on the anniversary of the day when the late Enrico Fermi and his associates, among them Wigner, proved that nuclear fission could be self-sustained and controlled. This year's ceremony marks the 16th anniversary of the start-up, in 1942, of the first nuclear reactor under the stands of Stagg Field at the University of Chicago.

The award was recommended by the AEC's General Advisory Committee and approved by President Eisenhower. The Advisory Committee's recommendation was contained in a letter, dated 7 August, from the committee's chairman, Warren C. Johnson, to AEC chairman John A. McCone. After reporting that it was the unanimous recommendation of the committee that the award be made to Wigner, the letter reads:

". . . Dr. Wigner is one of the most renowned authorities in theoretical physics. His contributions have been both numerous and outstanding in the field of nuclear physics but have not been limited to this field; on the contrary, they have embraced many areas of theoretical physics.

"Dr. Wigner was the first to calculate, and with unusual accuracy, the correct lattice proportions of uranium and graphite in the design of the Hanford production piles. He also predicted the dislocation effect caused by fast neutrons in graphite, and designed experiments to verify his prediction. As a consequence, we were forewarned at an early date of a very serious problem in the operation of graphite piles. Also it was largely due to Dr. Wigner's insistence that the water-cooled design for the Hanford piles was adopted instead of other concepts. This decision was of the greatest importance in insuring the necessary production of plutonium during the war and the years to follow.

"During the past decade or so, Dr. Wigner has made numerous contributions to the development of nuclear reactors, both for military and civilian purposes. Also, he has been responsible for the