AAAS Election Results

The AAAS Council by mail vote has elected Paul E. Klopsteg, associate director of the National Science Foundation, as president-elect of the American Association for the Advancement of Science. Dr. Klopsteg has been a member of the AAAS Board of Directors since 1949.

William W. Rubey, research geologist with the U.S. Geological Survey, and Thomas Park, professor of zoology at the University of Chicago, were re-elected to the Board of Directors. Both terms are for four years.

Formal announcement of the election was made today at the AAAS Council meeting in Indianapolis.

British Pamphlet on Hydrogen Bomb

The British Government has issued a handbook on what to do if hydrogen bombs fall. The pamphlet, entitled *The Hydrogen Bomb,* says:

"Not only would death and destruction be on a greater scale than ever before but also there would be no easy return to normal life for the survivors. It would mean a long struggle to keep life going, and the bulk of the country's resources would be concentrated on relief and rescue in the worst stricken areas."

The pamphlet reports further that the ground burst might dig a crater about a mile across and as deep as 200 feet. "It must be recognized that within three or four miles of the hydrogen bomb all buildings would be completely, or almost completely, destroyed."

Readers are advised that woolen clothes would be less likely to catch fire than others, that windows should be whitewashed, that flammable objects should be kept away from windows and doorways, and that heating plants should be turned off. Much of the advice given is almost identical with that provided by the British Government in the autumn of 1940 when the first German bombs—the biggest then were about 550 pounds—began to fall on London.

AEC Finances

The financial report of the Atomic Energy Commission for fiscal year 1957 (year ending 30 June 1957) shows that the total investment in plant and equipment increased from $6.6 to $6.9 billion during the year. Plant retirements because of obsolescence amounted to $83 million. Other comparative expenditures and assets were as follows (figures for 1956 in parentheses): inventories of nuclear materials, $1.7 billion ($1.6 billion); cost of operations, $1.97 billion ($1.61 billion). The costs of operation included the following: procurement and production of materials, $1.2 billion ($1 billion); weapons development and fabrication, $337 million ($281 million); development of nuclear reactors, $276 million ($170 million); research in chemistry, metallurgy, and physics, $59 million ($52 million); research in cancer, medicine, and biology, $33 million ($30 million); administrative expenses, $38.5 million ($38.2 million).

During the year the AEC purchased 32.4 million pounds of uranium concentrates at a cost of $355.8 million as compared with 20.1 million pounds at $238 million in 1956. The purchase of additional source materials brought the totals up to $402 million and $281 million, respectively. Slightly more than half (53 percent) of the uranium concentrates were procured from other countries.

Research and development costs for power reactors rose from $45.8 million in 1956 to $56.7 million in 1957, and reactor construction costs rose from $9.4 to $33.3 million.

Operating costs of the AEC research laboratories increased from $233.1 to $289.3 million. Some of the allocations for research in special fields were as follows (in millions): chemistry, $19.4; metallurgy, $6.1; physics, $28.7; cancer, $3.4; medicine, $9.2; biology, $11.6; biophysics, $4.4; dosimetry and instrumentation, $1.9.

Visiting Professors in Astronomy

The American Astronomical Society has announced the inauguration of a program of Visiting Professors in Astronomy for the first half of 1958. The program, made possible by a grant from the National Science Foundation, aims to strengthen and stimulate college programs in astronomy and in the other physical sciences; to give astronomers and other scientists opportunity for contact with creative astronomers from other universities and observatories; and to motivate good college students to consider careers in astronomy or one of the other physical sciences.

The visiting professors are ready to give general college addresses or lectures to astronomy classes, or to participate in seminars. They will be glad to advise students on opportunities for advanced study and employment in astronomy, and to discuss teaching problems and curriculum with members of the faculty. In short, the lecturers will cooperate with the colleges in all ways they can to further the aims of the program. A normal visit by a professor will last for two or three days.

There will be three professors in the spring of 1958: Paul W. Merrill, Seth B. Nicholson, and Harlow Shapley. Merrill will be available from February through May in the Far West. Nicholson will tour the Midwest from February through May. Shapley will lecture in the East during February and March. For further information, communicate with Dr. William Liller, the Observatory, University of Michigan, Ann Arbor, Mich.

Radiation Level Lowered

On 10 December the Atomic Energy Commission reduced by two-thirds the level of radiation exposure permitted for workers in the atomic facilities of the commission, the people living near those facilities, and workers in the atomic facilities of the commission's contractors. The new standards do not affect the operations of private companies licensed to use radioactive materials, but the commission said that it will amend the regulations governing private companies so that they will conform to the new standards.

The new levels follow the recommendations made in January 1957 by the National Committee on Radiation Protection and Measurement, an intergovernment committee that has been advising on radiation exposure for more than twenty years. The national committee stated that "changes in the accumulated maximum permissible dose are not the result of evidence of damage due to the use of earlier permissible dose levels, but rather are based on the desire to bring the maximum permissible dose into accord with the trends of scientific opinion."

For the first time atomic workers are placed on a schedule that limits the accumulated radiation exposure over the years. A worker may receive an average exposure of 5 rem per year and not more than 15 rem in any one year. (The term *rem,* which stands for roentgen equivalent man, is used for a radiation dose of any ionizing radiation which is estimated to produce a biological effect equivalent to that produced by one roentgen of x-rays.) In the past, workers could receive up to 15 rem every year; there was no provision to control the accumulated exposure over the years. The commission said that, in practice, the radiation exposure of nearly all the workers in commission facilities has been below the new standards. People living near atomic facilities may receive one-tenth of the exposure permitted atomic workers, which is the same ratio employed in the earlier regulations.

In line with another recommendation by the national committee, the commis-