

PHYSICS

First Einstein Award

Medal established by Lewis L. Strauss in memory of his parents is given for work in mathematical physics and mathematical logic.

► THE FIRST Albert Einstein Award for achievement in the natural sciences has been won by Prof. Julian Schwinger of Harvard University, a mathematical physicist, and Prof. Kurt Godel, member of the Institute for Advanced Study, Princeton, N. J., a mathematical logician.

The awards were established by Lewis L. Strauss, president of the Board of Trustees of the Institute for Advanced Study and one of the original members of the Atomic Energy Commission, in memory of his parents, the late Lewis and Rosa Strauss, of Richmond, Va.

Formal presentation of the award took place at Princeton on March 14, on Dr. Einstein's seventy-second birthday.

The winners will divide the \$15,000 prize and will receive a medal which has been designed by Gilroy Roberts, Philadelphia sculptor and engraver, who has done much medallic work for the United States mint.

The award committee consisted of Dr. Einstein, Dr. Robert Oppenheimer, director of the Institute for Advanced Study; Dr. John von Neumann and Dr. Hermann Weyl, both of the Institute for Advanced Study.

Prof. Schwinger has worked in the field of atomic physics. His most recent work has given science new understanding of the problem of interaction of light and matter and the properties of electrons and light. His calculations on the influence of self-energy on the hydrogen fine-structure and on the magnetic moment of the electron generally are regarded as a major advance in the understanding of quantum electrodynamics.

He developed new methods for the treatment of electro-magnetic waves. This formed the basis for much of the practical work with micro waves and had great civil and military significance. He originated new mathematical tools for the analysis of collisions, on which scientists depend heavily for understanding relations between elementary particles.

Early in his career he contributed many important suggestions about the structure of atomic nuclei and about many decisive experimental studies of nuclear interaction.

Dr. Godel's work in mathematical logic is regarded as one of the greatest contributions to the sciences in recent times. He was able to prove the existence in a properly codified mathematical system of propositions inherently "undecidable."

Following a broad study of the logic of provable and disprovable propositions, he

made further notable contributions to science by proving that two of the axioms generally used by mathematicians, although frequently doubted, namely the "axiom of choice" and the "cantor continuum hypothesis", are consistent with the other axioms of set theory if these axioms are consistent.

He has gone deeply into the history of logical and scientific ideas. Although he has not published much on the subject, he is an authority on Leibniz. It was part of Leibniz' program for science to work out a symbolic logic of the sort which is now being developed and of which Dr. Godel is a leading protagonist.

Dr. Schwinger was born in New York City, Feb. 12, 1918, and received his A.B. and Ph.D. at Columbia University. He was a National Research Fellow at the University of California, instructor in physics at Purdue University and has lectured at the University of Michigan. He has been at Harvard since 1945 and Professor of Physics since 1947.

Dr. Godel was born in Brunn, Czechoslovakia, April 28, 1906. He received his Ph.D. in 1930 at the University of Vienna and taught at the University of Vienna from 1933 to 1938, when he came to the United States. In this country, he has been connected with the Institute for Advanced Study, of which he has been a permanent member since 1946. He has taken out his first naturalization papers.

Science News Letter, March 24, 1951



ALBERT EINSTEIN MEDAL—First award of this medal for achievement in the natural sciences was made to Prof. Julian Schwinger, of Harvard University, a mathematical physicist, and Prof. Kurt Godel, mathematical logician of the Institute for Advanced Study.

BIOLOGY

Cotton from Some Parts Reduced in Value

► COTTON from certain sections of the country is being attacked by increasing numbers of bacteria and fungi. The ravages of these micro-organisms are considerably reducing the cotton's value.

The damage is of importance to the manufacturer, the farmer and others concerned with cotton culture, J. P. Elting, of the Kendall Mills Research Laboratories, Paw Creek, N. C., points out (SCIENCE, March 16). In studying the increase in the amount of damaged cotton, he has found that the micro-organisms penetrate and swell the individual fibers, in some cases causing almost total destruction.

Officials at the Department of Agriculture state that the increase in micro-organism damage is probably a result of several causes. These include progressively earlier and earlier planting and harvesting of cotton, an effective way of avoiding insect ravages. A combination of hot and wet weather at the time the cotton bursts, plus the increased use of fertilizers, gives the best possible growth stimulant for the micro-organisms. Slow action of the micro-organisms, so that the damage is not recognized before milling, may also be a contributing cause.

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Several widely-grown *crops* of the temperate zone had their origin in tropical areas; included are tomatoes, peppers, sweetpotatoes, lima beans, eggplant and corn.

Modern *shoe-making*, from green hide to the finished footwear, uses some 300 materials in addition to the leather.