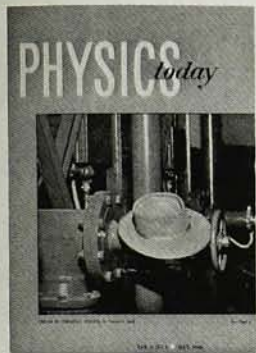


TWENTY YEARS



PHYSICS TODAY is 20 years old this month; our first issue was published in May 1948. In this birthday issue we review some of the things that have happened in 20 years of physics and 20 years of PHYSICS TODAY.

To survey two decades of physics, we asked our authors to write short, general articles. Of course they had to leave out many people, events and ideas, but they delineate significant trends and major developments in reviewing 13 fields of physics.

Our PHYSICS TODAY story is in three parts, told by the present and two former directors of the American Institute of Physics. Henry A. Barton discusses the early years and Elmer Hutchisson the recent years. H. William Koch tells what the institute intends the magazine to be. In an editorial Ralph A. Sawyer, chairman of the AIP Governing Board, comments on the growth of physics and prospects for the future.

Volume 1, number 1 of PHYSICS TODAY had 44 pages, 13 of them advertising. It was a gift from the institute to the readers, founded among misgivings and doubts as to whether anybody wanted it and whether it could become self supporting. In his opening editorial the first editor, David Katcher, explained that the intention was nontechnical physics and other material of interest to the readers. It was intended for physicists and also for others who wanted to read about physics: chemists, students, teachers, lawyers, writers.

Do you remember some of those first few issues? Here are some of the things we found in looking back at volume 1:

"A semiconductor has been used for electronic amplification in the Bell Telephone Laboratories . . . Developed by John Bardeen and Walter H. Brattain under a general research program initiated and directed by William Shockley, the Transistor, as it is called, is a semiconductor triode which can be used as an amplifier, an oscillator, and in other ways in which vacuum tubes perform." (August 1948, page 22)

In a report on the Pocono Conference, Richard Feynman wrote that in the previous year discrepan-

cies had been found between Dirac theory and results from atomic-beam experiments. At the conference Julian Schwinger and Feynman presented theories to remove the discrepancies. Feynman wrote, "Apparently all the results of the delicate experiments can now be understood . . . The conference showed that just as we were apparently closing one door, that of the physics of electrons and photons, another was being opened wide by the experimenters, that of high-energy physics."

Earlier in his report Feynman wrote, ". . . in the last year it was found, in experiments by Powell in England, that photographic plates sent high in the atmosphere show tracks due to particles in the cosmic rays with mass about 320 times that of an electron. These are called, for lack of a better name, heavy mesotrons, the 200-electron-mass particles being called light mesotrons." (June, page 8)

The June issue (page 36) also carried an advertisement, "Announcing a new book, College Physics by Francis Weston Sears and Mark W. Zemansky . . . complete (two semesters) \$6.00."

"The Science Foundation Bill, which has been so much talked about among scientists, appears now to have achieved a form generally acceptable to scientists, the Congress and the Government." (May, page 8)

Aberdeen Proving Grounds advertised for physicists, salaries available from \$2644.80 to \$9975.00. (September, page 32)

Karl Darrow complained, in a report on the APS Washington meeting, "Every session was simultaneous with three or four others; and not even the wildest form of quantum mechanics permits an observing particle to exist in four or five places at once." (June, page 20)

Arthur D. Little advertised (May, page 39) a Collins helium cryostat, "The first equipment offered on a ready-to-use basis for liquefying helium and other gases." (May, page 39)

That's the way it was our first year. Now that 20 years have gone by, we hope you will join us in reminiscence, assessment and perhaps even a look into the future.

—GBL□

PHYSICS TODAY

