ticles[20] may provide another way of detecting traces of antibody, as well as of measuring the electrical properties of purified viruses that can not be obtained in amounts sufficient for the usual electrophoretic procedures. Some antigen-antibody reactions alter the viscosity[42] and the light-scattering of systems in which they occur; it is not yet known if these things happen when the antigen is a virus. Whether the most useful method turns out to be one of the foregoing, or some other, it seems certain that better ways of detecting minimal amounts of antibody will result from the use of purified viruses; and as antibodies are purified they will in the same fashion enhance the sensitivity of virus-detection.

OBITUARY

FREDERICK SLOCUM

AFTER an illness which had confined him to the college infirmary for about six weeks, Dr. Frederick Slocum, professor of astronomy at Wesleyan University and director of the Van Vleck Observatory, died on December 4 at the age of seventy-one years.

Professor Slocum had three leading interests, scientific research, teaching and the sea; and these three interests seemed to share his energy and his affections without dividing them. His knowledge of sailors, ships and fish enriched his teaching; and sailing and fishing gave him needed relaxation from his administrative and teaching duties.

He was born at Fairhaven, Massachusetts, on February 6, 1873, the son of Frederick and Lydia Ann Jones Slocum. His father was captain of a whaling ship, and Frederick's early years were spent in a nautical environment. During the long summers on Cuttyhunk Island he became skilful in sailing and in navigation and acquired a love of the sea which he never lost, although in later years his profession sometimes required him to live far inland.

In 1891 Mr. Slocum entered Brown University, and for eighteen years as student and teacher he was connected with that institution, receiving the degrees of A.B., A.M. and Ph.D. in 1895, 1896 and 1898, respectively. A fourth Brown degree, the honorary doctorate of science, was conferred upon him in 1938. After receiving the baccalaureate degree, he served as instructor in mathematics for five years and then as assistant professor of astronomy for nine years. During this period he was profoundly influenced by Professor Winslow Upton, by whom he was inspired to make astronomy his life work.

In 1899, while still at Brown, Dr. Slocum married Carrie E. Tripp, who was his constant companion at home and abroad until her death in 1942.

During the years spent at Brown in close association with Professor Upton, Dr. Slocum became an outstanding teacher. He remained a teacher for the rest of his life, but in 1908–09, while on leave from Brown, a year spent as volunteer assistant in the Royal Astrophysical Observatory of Potsdam marked the beginning of a fruitful research career.

After the year in Germany, Dr. Slocum returned to America to join the staff of the Yerkes Observatory of the University of Chicago. Here he worked with the recently invented spectroheliograph, studying the circulation of the solar atmosphere, and he was one of the first to call attention to the fact that matter from solar prominences seemed to move toward and into near-by sunspots. In addition to the solar work Dr. Slocum continued the stellar parallax program started by Schlesinger, introducing the use of Wallace's color filters to produce sharper photographic images.

The years at Yerkes were devoted primarily to research, but Dr. Slocum was still a teacher, and graduate students who came to Williams Bay for the observational part of their training soon learned that in him they could find a skilful guide and a friendly counselor.

In 1914 Dr. Slocum was called to Wesleyan University as professor of astronomy. There his first task was to plan the new Van Vleck Observatory and supervise its construction. In choosing for the principal instrument of the observatory a twenty-inch visual refractor, he had in mind the continuation of his stellar parallax observations and also the requirements of a fairly extensive teaching program. The observatory staff soon increased to four in number, and under Dr. Slocum's leadership a regular program of parallax and other astrometric observations was maintained until the establishment of a Naval Flight Preparatory School at Wesleyan in 1942 made it necessary for the members of the staff to devote all their time to teaching. Although beyond the usual retiring age, Professor Slocum carried his full share of the teaching load until failing health necessitated his retirement on November 1, 1944.

The continuity of Professor Slocum's work at Wesleyan was broken by an absence of three years from 1917 to 1920, when he served for one year as instructor in navigation for the United States Shipping Board and for two years as professor of nautical science at Brown University.

During his year at Potsdam and during several later trips to Europe, Professor Slocum made many friends among the astronomers of other lands, and

[42] du Noüy, "La Température critique du Sérum" (Hermann et Cie, Paris, 1936), Chap. III.

he was active in the affairs of the International Astronomical Union from its very beginning. He was a fellow of the Royal Astronomical Society of England and a member of the Astronomische Gesellschaft and of the Société Astronomique de France. At home he had served as vice-president of the American Astronomical Society and as vice-president of Section D of the American Association for the Advancement of Science, and for three years he had been a member of the National Research Council. He was a member of the American Academy of Arts and Sciences. He was a member of Phi Beta Kappa and of Sigma Xi, but his membership in these fraternities did not consist solely in having his name on the list; he was an active participant in the affairs of their Wesleyan chapters.

As a quiet but effective advocate of good-will and cooperation both at home and abroad, as an inspiring teacher and congenial colleague, Professor Slocum will long be remembered by a world-wide circle of friends and acquaintances.

CARL L. STEARNS

RECENT DEATHS

WILLIAM BENJAMIN GREGORY, professor emeritus of experimental engineering and hydraulics of Tulane University, died on January 29. He was in his seventy-fourth year.

DR. EDWARD E. REINKE, professor of biology at Vanderbilt University, chairman of the division of natural science and mathematics, died on January 25. He was fifty-seven years old.

SCIENTIFIC EVENTS

THE UNITED STATES COMMITTEE FOR THE STUDY OF PARICUTIN VOLCANO

LAST June at the annual meeting of the Section of Volcanology of the American Geophysical Union, a symposium on the current activity of the infant Mexican volcano, Paricutin, caused the retiring officers to recommend to the National Research Council that a committee be formed under its auspices to integrate the study of the eruption and its effect before the opportunity was lost. The chairman of the Division of Geology and Geography then invited Richard E. Fuller, the newly elected president of the section, to assume the responsibility of serving as chairman.

By the end of July, the U. S. Committee for the Study of Paricutin Volcano was organized and approved with the stated objective: "The purpose of the committee is to coordinate with Mexican scientists the research on the Paricutin volcano and to encourage and facilitate studies in various scientific fields related to the problem. It intends thereby to avoid useless repetition and especially to save from neglect important aspects which depend on the collection of accurate data before activity subsides and the record of eruption is obscured by time. The scope of the proposed investigation includes geological, geophysical, chemical, meteorological and other scientific studies. The committee would endeavor to stimulate the interest and the support of scientific organizations and governmental agencies in these various projects." The initial members were Richard E. Fuller, *chairman,* research professor of geology, University of Washington; Fred M. Bullard, professor of geology and mineralogy, University of Texas; W. F. Foshag, curator of mineralogy, U. S. National Museum; L. C. Graton, professor of mining geology, Harvard University; D. F. Hewett, special staff scientist, U. S. Geological Survey; A. G. McNish, magnetician, Department of Terrestrial Magnetism, Carnegie Institution; Paul A. Smith, chief, Aeronautic Chart Branch, U. S. Coast and Geodetic Survey; O. W. Swainson, chief, Division of Geomagnetism and Seismology, U. S. Coast and Geodetic Survey; C. Warren Thornthwaite, chief, Climatic and Physiographic Division, Soil Conservation Service, U. S. Department of Agriculture; Howel Williams, professor of geology, University of California; E. G. Zies, chemist, Geophysical Laboratory, Carnegie Institution; William W. Rubey, *ex-officio,* chairman, Division of Geology and Geography, National Research Council. Subsequently, the committee was enlarged to include O. O. Fisher, of Detroit; Robert T. Hatt, director of the Cranbrook Institute of Science, and Ezequiel Ordóñez, chairman of the corresponding Mexican committee, and Vocal Geológo de la Comisión Impulsora y Coordinadora de la Investigación Científica.

Under the sponsorship of the Comisión Impulsora, Ordóñez, who has been principally responsible for recording the activity of the volcano, formed the Comite Mexicano para el Estudio del Volcan de Paricutin, with the following membership: Teodoro Flores, director del Instituto de Geología; Ricardo Monges López, director de la Facultad de Ciencias; Pedro C. Sánchez, director del Instituto Panamericano de Geografía e Historia; Manuel Medina, Jefe del Departamento de Geografía y Meteorología de la Secretaria de Agricultura; Alfonso de la O Carreño, Jefe del Departamento de Geología de la Comisión Nacional de Irrigación; Hermión Larios, Departamento de Exploraciones de Petróleos Mexicanos;