or individually. Consequently the secretary of the union will welcome suggestions from individuals as well as from officers of its member societies as to matters which could profitably be discussed at the next meeting which, as heretofore, will be open to all interested persons, even though they may not be official representatives of the member societies. It is hoped that all member societies will be represented by official delegates.

GEORGE W. HUNTER, III,
Secretary

GEOPHYSICS AS APPLIED TO CONTINENTAL STRUCTURE

ON December 27, at the meetings of the American Association for the Advancement of Science, a symposium on "The Importance of Geophysics to the Study of Continental Borders" will be presented by the American Geophysical Union before the astronomers of Section D and the geologists and geographers of Section E—this symposium having been arranged by the A. G. U. Special Committee on the Geophysical and Geological Study of Continents at the request of Section E. The purpose of this symposium will be both to define the functional relationship of geology and of geophysics in the determination of structural and dynamic conditions within the invisible portions of the earth's crust; and to illustrate how enormously the opportunities for the advancement of structural geology have been increased by geophysical research methods and appliances now existing.

Chester R. Longwell, of Yale University, will introduce the series of papers in a discussion of the relative roles of geology and geophysics in modern studies of the earth's crustal structure. Lieutenant Paul A. Smith, of the U. S. Coast and Geodetic Survey, will describe the nature and precision of the sounding methods, whereby submarine canyons have been traced along a part of the Atlantic margin of North America by Dr. A. C. Veatch and himself, under a project grant from the Geological Society of America. The geologic fate of the old continent or subcontinent of Appalachia will next be discussed by Wilbur A. Nelson, of the University of Virginia, after which Maurice Ewing, of Lehigh University, will describe the methods whereby the ocean-ward slope and depth of submergence of this old land area are being discovered. The delineation of deep-seated structural features of the earth's crust in continental border belts will then be the topic of papers by C. H. Swick, of the Coast and Geodetic Survey; G. P. Woollard, of Princeton, N. J.; and Perry Byerly, of the University of California. Mr. Swick will mention the modern methods used for gravity measurements, and will describe the recent programs of gravity observation in which the Coast and Geodetic Survey has been collaborating. Dr. Woollard will describe how geologic analyses of this evidence have shown that the visible structural features of the Appalachian Mountains are paralleled by invisible (but equally great) linear structural features, deep within the crust underlying the Piedmont and Atlantic Coastal Plain regions. And Dr. Byerly will show how seismic information can be used to determine the nature and dynamic condition of some of these deep-seated structural features of coastal areas. H. T. Stetson, of the Massachusetts Institute of Technology, will next discuss how the roles of extra-terrestrial forces in inducing crustal deformation may be tested, and how certain structural problems may possibly be solved by collaborative, astronomic-geophysical-geological studies, involving the use of the crystal chronometer and of other devices for the exact determination of time and of geodetic position. W. T. Thom, Jr., of Princeton University, will conclude the symposium by summarizing the results thus far achieved through geophysical research, as well as the opportunity (and need) for further collaborative study of continental borders—which are the thresholds to the "great unknowns" of the sub-oceanic lithosphere. A discussion period will follow the last paper.

The symposium, which will begin at 2 P.M. in the Mosque, will be preceded by a morning program on the "Geology of the Coastal Plain and Continental Shelf." The twenty-four contributors taking part in these two sessions will give a searching and comprehensive review of problems which are currently under active investigation along the eastern seaboard.

H. A. MEYERHOFF, *Secretary, Section E*
H. T. STETSON, *Secretary, Section D*
J. A. FLEMING, *Secretary, American Geophysical Union*

RECENT DEATHS AND MEMORIALS

DR. CHARLES E. MUNROE, emeritus professor of chemistry at the George Washington University, died on December 7 at the age of eighty-nine years.

DR. JAMES PIERPONT, since 1898 until his retirement with the title emeritus in 1933 Erastus L. De Forest professor of mathematics at Yale University, died on December 9 at the age of seventy-two years.

DR. DANIEL L. WALLACE, from 1920 to 1931 professor of chemistry at the University of Pennsylvania, with which he had been associated for fifty-one years, died on December 5 at the age of seventy-eight years.

ELLEN LOUISA BURRELL, head of the department of pure mathematics at Wellesley College, who retired in 1916, died on December 3 at the age of eighty-eight years.

DR. HERBERT U. WILLIAMS, who retired in 1915 as