



Glen A. Rebka, Jr., and Robert V. Pound, shown at right, have been awarded the 1965 Eddington Medal of the Royal Astronomical Society. The Society's Gold Medal was received by Gerald M. Clemence, below.

Royal Astronomical Society

Robert V. Pound of Harvard University and Glen A. Rebka, Jr., of Yale University have been awarded the Royal Astronomical Society's Eddington Medal for 1965. They were honored for their series of experiments which confirmed Einstein's prediction that gravitational potential would shift the apparent frequency of electromagnetic radiation. Pound and Rebka took advantage of Mössbauer's (then recent) discovery that atoms in certain crystals would emit gamma rays virtually without recoil, thereby providing a beam of very sharply defined energy. Since the frequency spread of such a beam was less than the predicted gravitational shift over a practicable distance of fall, Pound and Rebka were able to measure the frequency shift sustained by a beam from ^{57}Fe as it fell 74 feet in the interior of a tower in Harvard's Jefferson Physical Laboratory. Their initial report in *Physical Review Letters* for April 1, 1960, indicated measurements averaging 105 percent of Einstein's predicted value with an experimental uncertainty of ten percent. Subsequent work by Pound and J. L. Snider has refined the result to 99.7 percent of the predicted value with an uncertainty of less than one percent.

Mr. Pound has been associated with Harvard since 1945 and has been a full professor since 1956. A native of Ridgeway, Ont., he graduated from the University of Buffalo in 1941 and spent the war years working at the MIT Radiation Lab. Dr. Rebka has been assistant professor at Yale since 1962. Born in Cincinnati, he was educated at Harvard where he earned the AB, MA, and PhD degrees, the last in 1961.



The Royal Astronomical Society has awarded its Gold Medal to Gerald M. Clemence of Yale University. He was cited for his application of celestial mechanics to the motions in the solar system and his contributions to the study of time and the system of astronomical constants. Mr. Clemence's major work in celestial mechanics, his theory of Mars, represents the motion of the planet with a far greater accuracy than that achieved in comparable efforts. His most important contribution to the study of time was his formulation of a definition of ephemeris time, which was subsequently adopted as the basis of an international agreement.

Associated with the US Naval Observatory for over 30 years, Mr. Clemence served as director of the *Nautical Almanac* during 1945-58 and as the Observatory's scientific director from 1958-63. His services during this period were honored with the Robert Conrad Award of the Office of Naval Research and by two medals from the US Navy. In July 1963, he joined Yale's Department of Astronomy as a member of the staff of the Celestial Mechanics Research Center. A former vice president and president of the American Astronomical Society, Mr. Clemence is also a fellow of the Royal Astronomical Society, and a corresponding member of the French Bureau des Longitudes.

Nernst manuscript acquired

The Niels Bohr Library of the American Institute of Physics has obtained an original manuscript by Walther Hermann Nernst, the German physical chemist who won the 1920 Nobel Prize in chemistry. One of the founders of modern physical chemistry, his numerous achievements included the establishment of the heat theorem which bears his name, the determination of specific heats at very low temperatures, and his method for determining the dielectric constants and their influence on electrolytic dissociation. He died in Muskau, near Berlin, in 1941.

The Nernst manuscript is the first of a series of six papers which appeared between 1909 and 1911 on the thermodynamics of water, while Nernst was director of the Physical-Chemical Institute of Berlin University. Written in a tiny hand in old German script, the report is entitled "Thermodynamic Treatment of Some Properties of Water, Part I", and is dated 22.7.1909.

Reprints of all six articles, written by Nernst and his collaborator, Herbert Levy, are included in a binding with the manuscript. Originally presented by Nernst to Levy in token of their long association, the manuscript was later given by Levy's widow to Sergei Feitelberg, head of the Physics Department at Mount Sinai Hospital in New York and Associate Clinical Professor of Radiology at Columbia University. Dr. Feitelberg is the donor of the Nernst manuscript to the Niels Bohr Library.



W. H. Nernst