

Edward Williams Morley

(This information is summarized from a longer article written for ISOTOPICS by Marion Cleveland Lange and published in November, 1965.)

Edward Morley was born January 29, 1838 and spent his childhood years on a farm near West Hartford, Connecticut. He later lived in North Attleboro, Massachusetts where his father was a Congregational minister. Until he was twelve years old he was tutored by his father, learning to read at the age of three and beginning the study of Latin at the age of six. In 1857 he entered Williams College as a sophomore. Although he prepared to become a minister he stayed at Williams a year after graduation working with Albert Hopkins in astronomy. From this came his first scientific paper titled "On the Latitude of the Williams College Observatory." After three years in a Theological Seminary, Morley became a licensed Congregational Minister in 1864. He then taught at a private school in Massachusetts where he discovered that he liked to teach.

Morley became Professor of Chemistry and Natural History at Western Reserve College in Hudson, Ohio in January of 1869 where he taught chemistry, botany, zoology, geology, mineralogy, mathematics (through calculus), mechanics, surveying, astronomy, meteorology, and human physiology. Fortunately classes were small. In equipping his student laboratory he built much of the equipment himself. When he took charge of the college observatory in 1871, he

inherited the contract to send the exact time daily to the railroads in Cleveland.

In 1882 Western Reserve College moved to Cleveland and became Adelbert College of Western Reserve University. There Morley collaborated with Albert A. Michelson of the neighboring Case School of Applied Science on the research which justly made them both famous. Their paper published in 1887; "On the Relative Motion of the Earth and the Luminiferous Ether," told of the negative results obtained in the attempt to measure the "ether" drift by means of an interferometer. Years later these results became a basis of the theory of relativity proposed by Albert Einstein.

Morley's other research efforts were also important. In 1896 the Smithsonian Institution published the results of ten years of his research on the densities of oxygen and hydrogen and on the ratio of their atomic weights. These efforts established Morley's international reputation as a scientist. He received many awards including the Davy medal from the Royal Society (London), the Cresson medal from the Franklin Institute, and the Gibbs medal from the ACS Chicago section. Morley served as the chairman of the Cleveland Chemical Society (the precursor of the Cleveland Section) in 1893 and 1894 and was elected president of the American Chemical Society in 1899. Morley retired in 1906 and moved to Connecticut where he lived until his death on February 24, 1924.