

## WILLIAMS, WILLIAM EWART (1894 - 1966), physicist and inventor

**Name:** William Ewart Williams  
**Date of birth:** 1894  
**Date of death:** 1966  
**Spouse:** Sarah Ellen Williams (née Bottomley)  
**Parent:** Jane Williams  
**Parent:** Ellis William Williams  
**Gender:** Male  
**Occupation:** physicist and inventor  
**Area of activity:** Science and Mathematics  
**Author:** Gwilym Arthur Jones

Born 3 March 1894 at Bodgarad, Rhostryfan, Caernarfonshire, eldest son of Ellis William Williams (manager of Cilgwyn slate quarry) and his wife Jane, Llys Twrog, Y Fron. After attending local schools he entered Owens College, Manchester University, where he had Rutherford, Bohr and Darwin as tutors. He graduated with honours in physics in 1915 and gained his M.Sc. (Manchester) degree in 1926. After training with Barr Stroud Range Finder Makers, Glasgow (1917-20) he became responsible for developing polarimetric and spectroscopic instruments of high resolution for Adam Hilger Ltd., London. At the recommendation of Prof. O.W. Richardson (Nobel Prize winner) he was appointed lecturer at King's College, University of London (1920-39). Under the supervision of Appleton and Richardson he was awarded a D.Sc. (London) in 1934. For his contribution to the techniques of high resolution measurements in spectroscopy he was presented with the Duddell Medal by the Physical Society of London in 1935. He became a Leverhulme Fellow in 1936. In March 1938 he resigned and emigrated to South California and by 1946 he was an American citizen. His particular field was interferometry and he became a worldwide authority on the subject. His monograph, *Applications of Interferometry* (1928, 1930, 1941, 1948, 1951) which was translated into several languages is considered a standard work. In 1949 he sold his personal laboratory at Pasadena to the U.S. Air Force. He was involved with the Northrop Company in the invention of a special type of window for the Mercury project. In 1952-53 he was the chief contractor for American Missile Control. In 1953, after a period of ill health and in collaboration with the physician, Dr Olive Hoffman, at Pasadena Institute of Research, he investigated the infra-red absorption spectra of steroids which led to the development of a new type of oximeter, but both of them died before seeing the fruits of their labour. In 1958 he joined the Firestone Tyre Company (makers of the Corporal Missile). He contributed extensively to the *Transactions* of the Royal Society and the Physical Society of London; *Review of Modern Physics*, *Zeitschrift für Physik*, *Nature*. etc. Between 30 and 40 of his patents were accepted by various companies in the United Kingdom, Germany and other countries. He married Sarah Ellen Bottomley, New Hey, Rochdale; they had no children. She was a linguist, and shared her husband's interest in music. He died at Pasadena 29 April 1966 and was buried in the family grave in Pisgah graveyard, Carmel, Caernarfonshire. He left a generous endowment to the University of South California to establish a scholarship to assist students of Welsh extraction to receive vocal and instrumental instruction there. His brother, Robert Arthur Williams, was Chief Conservation Inspector for Sydney Harbour, Australia. His youngest brother, Stanley Haydn Williams, Y Fron, spent more than fifty years as a minister of the Presbyterian Church in Wales.

### Author

**Gwilym Arthur Jones**, (1925 - 1998)

### Sources

Information from the Rev. Stanley H. Williams

### Additional Links

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