

## SUTTON, Sir OLIVER GRAHAM (1903-1977), meteorologist

**Name:** Oliver Graham Sutton  
**Date of birth:** 1903  
**Date of death:** 1977  
**Gender:** Male  
**Occupation:** meteorologist  
**Area of activity:** Science and Mathematics  
**Author:** Mary Auronwy James

Graham Sutton was born 4 February 1903, son of Oliver Sutton, Cwmcarn, Monmouthshire, and Rachel, daughter of William Rhydderch, Brynmawr, Breconshire. He attended Cwmcarn Elementary School, where his father was headmaster, and gained scholarships to Pontywaun Grammar School in 1914, and to University College of Wales (UCW), Aberystwyth, in 1920 where he graduated BSc (Pure Mathematics, 1st class honours) in 1923. He proceeded to Jesus College, Oxford, with a Welsh Graduate Scholarship and researched on series of orthogonal functions, graduating BSc (Oxon.) in 1925, having already published some of his researches in *Transactions of the Mathematical Society, London* in 1924.

After a year teaching mathematics at Canton Secondary School, Cardiff, he returned as Assistant Lecturer in Mathematics to UCW, Aberystwyth (1926-28), and developed a serious interest in mathematical physics. In 1928 he joined the Meteorological Office at Shoeburyness, and then at Porton, 1929-41, where he attended to basic scientific studies of practical problems such as the atmospheric dispersion of chemical agents. He saw the need for a completely different theoretical approach to the study of atmospheric diffusion and boundary layer turbulence which became of great importance in the study of industrial air pollution. Through his own theoretical contributions, and later in leading the whole group, his reputation was established as a scientist of the highest calibre, and led to his promotion into successively higher posts in scientific organization and administration, becoming Head of the Meteorology Section in 1938.

He was engaged in the organization of research and development of weapons during World War II (1941-47), with a constructive influence on the Porton wartime programme (1942-43), being Superintendent of Tank Armament Research (1943-45) and superintendent at the Radar Research and Development Establishment, Malvern (1945-47).

As Bashforth Professor of Mathematical Physics at the Royal Military College of Science, Shrivenham (1947-53) he was able to resume his attention to air pollution and served as chairman of the Atmospheric Pollution Research Committee (1950-55). He was also a member of the Beaver Committee whose report resulted in the Clean Air Act and the subsequent dramatic reduction in smoke pollution. During this period he was Scientific Adviser to the Army Council (1951).

He returned as Director General to the Meteorological Office (1953-65), with 3000 staff scattered over the British Isles, Mediterranean Sea and in ships. He was already interested in the entirely new method of dynamical weather forecasting using the first electronic computers to become available in this country. He arranged for more powerful equipment to be installed in 1958 and 1962. In 1959 a new branch for 'High Atmosphere Research' was established, connecting with the new space research and leading to satellite-borne experiments from 1964. Under his leadership both science and public service were promoted; telephone forecasts started in 1955, and adaptations were provided through radio and the developing television service.

He retired in 1965 but served the next three years as chairman of the Natural Environment Research Council (NERC) and was Vice-President of UCW, Aberystwyth from 1967 to 1976. He was elected a Fellow of the Royal Society in 1949, appointed CBE in 1950 for distinguished service to government scientific work, and knighted in 1955 for services to mathematics and science. He received many honours including Honorary DSc (Leeds), Honorary LLD (Wales) 1949; and honorary membership of several scientific and American societies, and he was presented with: the President's Gold Medal of the Society of Engineers (1957); Symons Gold Medal, Royal Meteorological Society (1959); International Meteorological Organization Prize (1968); and Frank A. Chambers Award, Air Pollution Control Association (1968).

He wrote several books including: *Atmospheric Turbulence* (1949), *The Science of Flight* (1950), *Micrometeorology* (1953), *Mathematics in Action* (1953), (with D. S. Meyler) *Compendium of Mathematics and Physics* (1957), *Understanding Weather* (1978); and also papers in scientific journals.

Graham Sutton married, 2 April 1931, Doris, eldest daughter of T. O. Morgan, Porthcawl, at Hermon (Welsh CM), Bridgend, Glamorganshire; they had two sons. From 1968 they lived at Sketty, and he died 26 May 1977 at Hafod, 4 The Bryn, Sketty Green, Swansea.

### Author

Dr Mary Auronwy James

### Sources

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### Further Reading

Wikipedia Article: [Graham Sutton](#)

### Additional Links

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