

Obituary

GERALD MERTON: 1893-1983

Dr Gerald Merton MC, MA, PhD, FRAS, died on 1983 May 4. He was a devoted member of the BAA for 63 years, serving it in very many ways, in particular as President (1950-52) and Director of the Comet Section and editor of *Circulars* from 1945 to 1958. He was awarded the Walter Goodacre medal and gift in 1963. Merton was a man of outstanding personality and ability and it is difficult in a short biographical memoir to do justice to his many and varied achievements.

Merton was born in London 1893 January 21 the son of Hermann and Antonie Schmiechen: his parents were later divorced and in early 1914 he took the surname of his stepfather Zachary Merton. He went to Bedales school and then to Cambridge matriculating from Trinity College in 1911 and obtaining his B A degree in Natural Sciences in 1914. At the outbreak of war he volunteered for the RFC and, on discovering that only qualified pilots were acceptable, he went away and learned to fly. He returned with a flying certificate in the following January and enlisted. Flying remained one of the great interests of his life, perhaps dating from 1909 when he saw Orville Wright fly his machine near Berlin. A fascinating account of Merton's service in the First World War is given in an article written by Peter Wright for the *Journal of the Society of World War I Aerohistorians*, a source I gratefully acknowledge.



After a period as a reconnaissance pilot in France his main service was in Mesopotamia where operations were organized from Basra, for which he set sail on 1916 March 14. In 1915 December he had married Rena Saunders, who sadly died a year later, indeed the letter congratulating him on the award of the Military Cross (for aerial combat) contained also the news of her death. Merton was also mentioned in dispatches for his 'exceptionally accurate aerial plotting' by a method which he had himself devised. His inventiveness also enabled him to measure the specific gravity of the local (Abadan) petrol and demonstrate that it contained too much heavy oil, thereby probably saving his colleagues from many accidents resulting from overheated engines. He was wounded in 1917 September and following hospitalization in India his later work was chiefly in photographic reconnaissance, perhaps a forerunner of his astronomical photography! One of his happy memories stemming from his World War I experiences was having dinner in the '20s at an astronomical congress in Heidelberg with his one-time German prisoner Dr Kruse of Bergedorf Observatory, Hamburg, with whom, among others he had shared his birthday parcel on the day Kruse was taken prisoner. During the '20s Merton was Chairman of the Air League (of the British Empire).

In 1919 January just before his 26th birthday Merton was demobbed with the rank of Major. He was married in June of that year to Mary Crowley and they made their home at Woldingham where a son, Patrick, and a daughter, Antoinette, were born. Here he erected a small observatory and his astronomical career began. He was elected to the RAS and joined the BAA in 1920, and his published work started in 1922 with a note on Comet 1906 VI in *Monthly Notices*. The family moved to Cambridge in 1922 and Merton was admitted as a PhD student working on cometary and planetary orbits, collaborating closely with Dr A. C. D. Crommelin of the RGO. The degree was awarded in 1927 by which time the family had moved to Blackheath to a house close to the RGO where, at the invitation of the Astronomer Royal (Sir Frank Dyson), Merton had become an active voluntary worker and had joined forces with his life-long friend Dr W. H. Steavenson. It was in 1923 that the first BAA *Circular* was printed by Merton on a hand press; he was elected to the Council of the BAA in 1929 and served at various times from then onwards.

Although after the Greenwich period he maintained his astronomical connections, Merton's chief concern for the next ten years was in physiology and medicine, working with Harold Dodd FRCS at King George Hospital, Ilford, and later at Bishops Stortford, after the outbreak of World War II. In 1940 he joined the Air Transport Auxiliary ferrying planes and was also engaged on accident investigations, indeed in 1944 he was invited to join the Air Safety Committee of BOAC. He also helped to organize the Blood Transfusion service in Oxford after the family moved there in 1940, where treatment was available for his daughter suffering from the after effects of poliomyelitis. After a great deal of moving around in his earlier days 17 Holywell Street, Oxford, became home for the rest of his life.

After World War II Merton returned to astronomy as his chief interest and started to work, in a voluntary capacity, at the Oxford University Observatory where H. H. Plaskett was Director and Savilian Professor. He was appointed a Departmental Demonstrator in 1947 and served until 1955 when he again became an honorary staff member. During this period (1950-1952) he was a notable President of the BAA; his first presidential address was on "Comets and their origin" and the second, on "Photography and the Amateur Astronomer", was reprinted as a booklet which remained in circulation until quite recently. In 1956 he became Treasurer of the Royal Astronomical Society and served for the next 11 years. Dr Alan Hunter, who succeeded him in this office writes "He was in his element here, putting to good use in the Society's service the knowledge he had acquired privately" and refers to his "uncanny judgement on underlying trends". He also writes that Merton still made his advice available to his successor. After the end of his term as Treasurer, Merton continued to be of the greatest help in acting as unofficial RAS representative in Oxford, steering through to publication (by Blackwell's Scientific Publishers) the rapidly increasing volume of material for *Monthly Notices* of the RAS.

Except during the medical work period and World War II Merton maintained a steady output of astronomical publications, from 1922-54 in *Monthly Notices* and a *Memoir* in 1927, and in the *Journal* of the BAA from 1923 onwards. His name will always be especially associated with the observation of comets and the determination of cometary orbits. In his PhD work he produced an important modification of Gauss's method for orbit determination and refined the calculations so that comets could more readily be recognized on succeeding apparitions. He demonstrated this by his identification of Comet 1902II with Comet 1922I and made a successful prediction of its return in 1927. His observational work was carried out at Woldingham, the RGO and at Oxford where, as he had done at the RGO, he attached a pair of cameras to the 300 mm refractor and tested his "modification of the perturbation of elements method". His theoretical work was much expedited by his great and continued interest in computation to which he was first introduced by Dr Comrie in 1920. He wrote the RAS Council annual Reports on Comets from 1947-1954. From the First World War he was interested in photography and in the measurement and reduction of photographic plates. In 1953 he developed a new method for finding the spherical co-ordinates of an object from three nearby stars, which is particularly useful for the curved fields produced by Schmidt cameras.

Merton was devoted to family and home and delighted in the achievements of his children and grandchildren: his daughter became a Fellow of the British Horological Institute, and he lived to see his son, an eminent neuro-physiologist, elected an FRS, and his grandson qualify as a medical practitioner. As time went on he gave his energies increasingly to home commitments. Mary Merton died in 1975 and Gerald suffered a stroke in 1978 which left him

with physical disabilities requiring hospitalization, though he could make the occasional day-time visit home. He remained mentally alert, so much so that in his 91st year he was asking for an explanation of the charge coupled device by which the first photographs of the returning Halley's comet had been obtained. He was immensely cheered by letters, messages and visits from astronomical colleagues and especially liked to hear about the BAA, the RAS and the RAS club.

During his lifetime Gerald Merton moved with distinction in so many worlds that one person can hardly know the whole. What will be remembered in all the spheres of his activity is the very able and inventive Dr Merton and the generous, courageous and fun loving Gerry, who accorded

their full worth to everyone he met. He had a great capacity for enjoyment of simple as well as sophisticated things: in his last years he delighted in being pushed round St Giles Fair to see the excitements and sample the delicacies available! Never more clearly were his courage and great inner resources shown, than in the world of his last illness where he, and his daughter, who visited him almost daily, brought special reassurance to a hospital ward.

I am very grateful for the help I have received in the preparation of this note, in particular from Miss Merton, Dr Patrick Merton, Mr Beet, Dr Hunter, Dr Dewhurst and Dr Sadler.

M. G. Adam