I first met Andrew Murray in the 1970s when I visited the Royal Greenwich Observatory (RGO) as a doctoral student and he and George Wilkins helped me with the calculation of some 17th-century lunar and planetary positions. We became friends and found that we shared several interests and loyalties: to historical astrometry, to Oxford and to the Church of England. Andrew was an astrometer throughout the whole of his professional career in astronomy, between 1949 and 1986.

Andrew was born in Eastbourne in 1926, the son of an architect. He went in 1939 to Westminster School, which was about to be evacuated to the safety of Hertfordshire. In 1944 he won an exhibition to Christ Church, Oxford, to read mathematics, after which he served in Egypt in the Army Education Corps. Andrew entered professional astronomy via the Labour Exchange. Looking for a mathematically related job upon leaving the Army in 1949, he was directed towards a temporary assistant experimental officership at the Royal Observatory, then on Greenwich Hill. This would lay the foundation for his distinguished career as an astronomer. Andrew often lamented, however, that his academic training as a mathematician obliged him to learn his physics on the hoof, at Greenwich. Geometry was really his passion, and this made him ideally suited to practise the most ancient branch of astronomy: astrometry.

At Greenwich, Andrew cut his teeth in astrometry by doing meridian work with the 100-year-old Airy Transit Circle, which still defines the International Greenwich Meridian. Meridian work had been the bedrock of Greenwich astronomy, going back to Flamsteed in 1675. Andrew gave me detailed accounts of how the Transit Circle was used, corrected, and its results analysed, as well as demonstrating it to me, with Gilbert Satterthwaite, in 1996. I also recall him telling me about the dirty air of Greenwich in the early 1950s, for when you covered your desk with a white sheet before going home, it would be speckled with carbon particles next morning. It is hardly surprising that Andrew played a significant part in establishing the Greenwich–Herstmonceux meridian difference after the Royal Observatory’s move to the cleaner air of Sussex in 1954.

Modern astrometry

In many respects, Andrew Murray’s RGO career presents a history of astrometric advance across four decades: from Airy’s Transit Circle and the Cooke Reversible Transit Circle, to Hipparcos and beyond. Indeed, in an unpublished autobiographical memoir kindly sent to me by his widow Mary, one can trace the progress of modern astrometry as it moved from manual to electrical, photographic and on to digital technologies. A branch of astronomy, moreover, which would come to play a vital role in a diversity of fields, such as timekeeping, geodesy, spacecraft navigation, optical and radio cosmology, and in the exact visual identification of pulsars.

In 1960 Andrew left the Meridian Department to work in RGO astrometry. Data reduction, or the obtaining of useful information from raw observations, was always a problem, for one could make observations quicker than one could “reduce” the data, especially photographic data. After 1965 he came to work with the new electronic GALAXY machine to measure 6000 astrometric plates, along with working on the early development of the European Space Agency’s Hipparcos astrometric satellite, launched in 1989. Indeed, these were enterprises replete with complex geometrical problems of a kind to which Andrew was naturally drawn.

Andrew travelled widely in the cause of astrometry. He played an important role in the setting up of Denmark’s ground-breaking Carlsberg Automatic Meridian Circle at La Palma in the 1970s, as well in new centres of astrometric excellence in the USA, Australia, Russia, Finland and elsewhere. Andrew Murray became a world authority on astrometry and the development of refined angle-measuring and reduction techniques. I remember attending his “standing room only” Halley Lecture at Oxford on “The distances to the stars” in May 1988. And his Vectorial Astronomy (1983) provided a classic statement on modern astrometry.

Andrew was also involved in the commissioning of the Sir Isaac Newton 98 inch telescope at Herstmonceux, formally inaugurated by HM The Queen in 1967, and soon after he described and demonstrated the prime focus arrangement of the telescope on the BBC’s Blue Peter children’s television programme.

Although observatory research can often be isolating work, astronomers as a breed tend to be convivial, and Andrew was certainly good company. He made and retained numerous friends across five continents. He probably began to acquire his circle of astronomical friends in 1952, when he became a Fellow of the RAS, and it expanded further upon his election to the RAS Dining Club in 1970. As well as friends, Andrew had powerful loyalties to institutions, most notably Christ Church, Oxford, and I used to enjoy meeting Andrew and Mary when they were up in Oxford for college events. Andrew Murray married Mary (née Nason), daughter of the Vicar of St Alphege’s Church, Greenwich, in 1954 and they had three children, Simon, Jane and Richard. Andrew and Mary were wonderful hosts at their house in Eastbourne. I am indebted to him for many insights into the modern history of British astronomy.

Andrew Murray had been ill for some time, but died suddenly and rather unexpectedly at home, on 7 November 2012. Rest in peace.

Allan Chapman