FREDERICK JAMES HARGREAVES

With the death of Frederick James Hargreaves on 1970 September 4, at the age of 79, the B.A.A. lost one of its great practical astronomers.

Jim Hargreaves was born at Bradford on 1891 February 10, but while still a child the family moved to Spalding and then to Coulsdon in Surrey—a town with which he was to be associated for the rest of his life. Hargreaves' early interest in science was fostered by his father. He was a natural draughtsman, a skill that was to prove of value later, and soon became an expert photographer, working in colour as well as monochrome. An injury during a critical period of his youth interfered with plans for an academic career. Instead he trained as a patent agent, becoming a Fellow of the Chartered Institute of Patent Agents. He was to spend the majority of his working life involved with patent law, advising potential patentees, and in time acting as an examiner of students sitting their finals.

Hargreaves spent a short period in the army, serving with the Artists Rifles, but he and military discipline were not compatible. He loved to tell the story of an officer who, on a hot summer day, ordered his men to use some of their water ration to dampen the felt lining of the water bottles—and then told them to place the bottles in the Sun, in order that the evaporation should cool the contents. He could not stand fools in authority and indeed was to write many a letter of complaint when he found those in positions of power abusing their trust. To all who would listen, he would preach the message that public servants should remain just that.

Hargreaves spent the 1914–18 war in the Aircraft Inspection Department and had many a short proving flight in the fighters and bombers of those days. His introduction to the B.A.A. was through a chance meeting between a relative and a Past President of the B.A.A., the Rev. T. E. R. Phillips. Phillips lived within easy bicycling distance of Coulsdon and Hargreaves was soon to become a regular visitor to the observatory at Headley. Such was his knowledge of photography that the then Director of the Photographic Section stood down in his favour, and he became a Member of Council within three years of joining our Association. He was to serve the Association through the Council more or less continuously for the next twenty years, being President during the difficult war years 1942–44. Hargreaves' keen eyesight, his skill as a draughtsman and his method of critical thinking (a natural gift sharpened by his Patent training) were used to the full when he took up planetary observing. The Headley group—Phillips, Peek and Hargreaves,—were such assiduous observers of Jupiter that they accounted for about half the total observations of the planet made by the Association during the period that they worked together.

But it is perhaps as an instrument designer and maker that Jim Hargreaves will best be remembered. He was most painstaking over getting his paraboloids right. After they had been figured in the workshop, they would be installed in a telescope and, on a night in which the temperature gradient was average, would be judged for correction. Slight adjustments to the figure would be made until the mirror was perfect under typical working conditions. In the 1930s really first-class astro-opticians were very scarce, and Hargreaves was soon carrying out work for the Royal Greenwich Observatory. He was for a time a consultant to Messrs Grubb-Parsons.

Hargreaves became a Fellow of the Royal Astronomical Society in 1925. He served on the Council of that Society for a number of years, being at one time a Vice-President. Other offices that he held were a Member of the Board of Visitors to the Royal Greenwich Observatory, and a Member of the I.A.U. Instruments commission. He was awarded the Jackson-Gwilt Medal of the R.A.S. in 1938 and the Walter Goodacre Medal and Gift of our Association in 1959. After the Second World War Hargreaves, with W. H. Cox and J. V. Thomson, formed Cox, Hargreaves & Thomson Ltd, a company whose major objective was to manufacture large telescopes. This the Company was to do and some major successes were the 95 cm Schmidt for the Vatican Observatory, the 1·2 m Uccle telescope and remounting the 30-inch Thompson telescope of the Royal Greenwich Observatory.

Hargreaves never kept secret his methods of optical work—he was always ready to discuss figuring techniques and pass on tips to other mirror makers. This has resulted directly in a strengthened British optical industry, and perhaps this is how he would best wish to be remembered—as a telescope manufacturer who left a legacy of improved techniques and instruments.

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