

## Theodore Evelyn Reece Phillips

It is with the deepest sorrow that we have to record the death of Theodore Evelyn Reece Phillips, by whose passing not only Britain, but perhaps the World, has lost her leading amateur astronomer.

Born on 1868 March 28 at Kibworth, in Leicestershire, he was the son of the Rev. Abel Phillips, formerly of Barbados and a missionary in West Africa. He was educated at Yeovil Grammar School and later at St. Edmund Hall, Oxford, where he graduated as B.A. in 1891. In the same year he was ordained and appointed to a curacy at Holy Trinity, Taunton. In 1894 he took his M.A. degree, and from 1895 to 1901 was curate in the parish of Hendford, near Yeovil.

At about the time of his leaving Taunton a friend, knowing of his interest in meteorology, kindly, if somewhat incongruously, presented him with a 3-inch refracting telescope. He has told the writer how he took his gift into the garden on the first fine evening and after scanning the heavens for a likely looking object selected a star of about the first magnitude. It turned out to be Saturn; and he has sometimes speculated on the difference there might have been in his career had he chanced upon Aldebaran, say, instead! But it is hard to believe that the fires that were instantly kindled could have continued to lie dormant for very long.

He was soon in possession of a 9½-inch altazimuth reflector, with which he began his systematic study of the planets, especially of Jupiter and Mars. He was elected a member of the Association on 1896 November 25, and the *Memoirs* for the 1896-97 apparitions of both Jupiter and Mars contain valuable contributions by Phillips.

On 1899 May 12 he became a Fellow of the Royal Astronomical Society, on the Council of which he later served, with but two short intermissions, from 1911 until the time of his death.

In 1901 he moved to the parish of St. Saviour, Croydon, and in this year, on the retirement of Rev. W. R. Waugh, Phillips assumed the Directorship of the B.A.A. Jupiter Section, an office which he fulfilled with the greatest distinction for one-third of a century! When in 1933 he asked to be relieved of his duties, it was partly owing to the pressure of other work, but also, one suspects, in order that he might see the new Director safely installed whilst he himself was still upon the active list and ready at any moment to come forward with the help and advice which his long experience and intimate knowledge of the planet made so especially valuable. It is of considerable interest in looking back through the *Jupiter Memoirs* dealing

with thirty separate apparitions, for the publication of which Phillips was responsible, to study their evolution in the earlier years and to note their final form, which has changed little since the apparition of 1914, when he decided to derive the rotation periods from the observations of members plotted *en masse* rather than to publish the periods as determined by various individuals. This series of *Memoirs* forms a continuous record that is probably unique in the history of planetary observation and is a contribution to scientific literature of which the Association may feel justly proud. Those engaged in any research upon Jupiter which involves a knowledge of the state or behaviour of his surface features must ever regard them as the standard works of reference covering the period 1901 to 1933.

In August 1906 he married Mellicent Kynaston of Croydon and they went to live at Ashted, where he held his last curacy from 1906 to 1916.

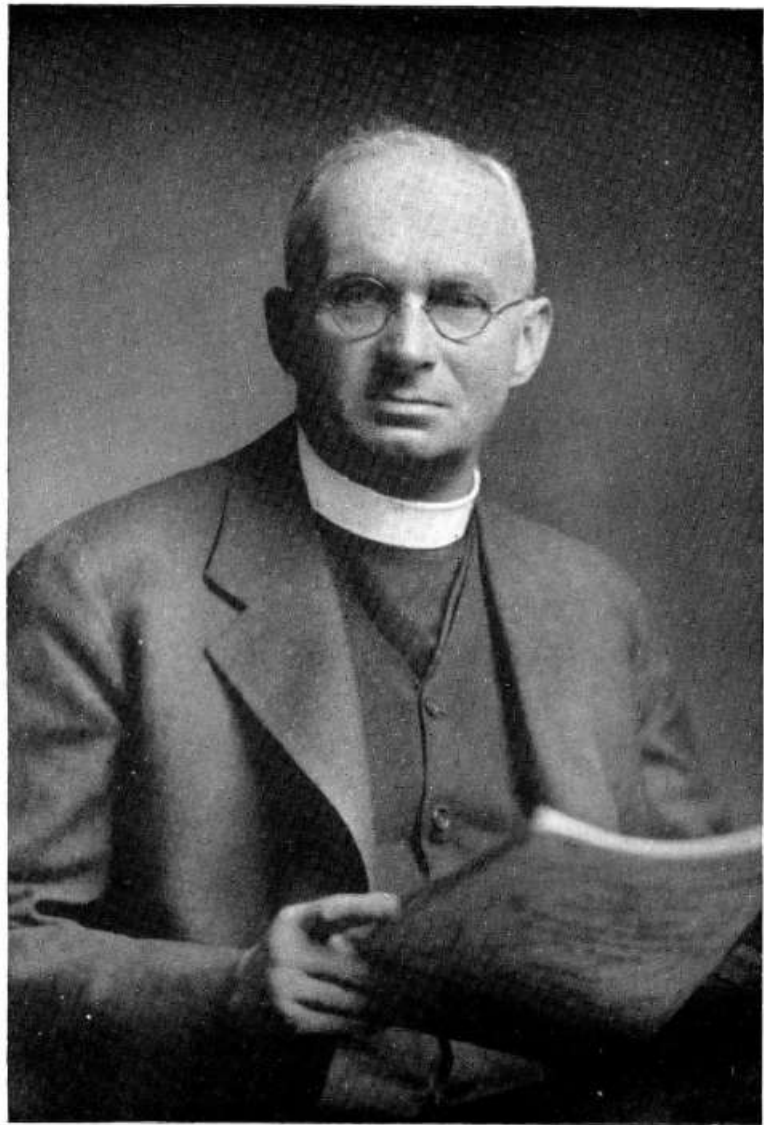
While he was at Ashted the Royal Astronomical Society received the offer of an exceedingly fine 8-inch Cooke refractor; but before accepting this bequest the Society felt that it would be wise to ensure that the instrument would be put to immediate and efficient use. It was indeed a happy suggestion that its custody should be given to Phillips, in whose hands it has helped to contribute so much to the progress of our science.

During the sessions 1914-15 and 1915-16 Phillips was President of the Association. In his first presidential address he gave us an admirable summary of our knowledge at that time of the surface features of the planet Jupiter and of the rates of drift of the currents in different latitudes. Although he did not often embark upon theoretical investigations, his second address presented the results of an harmonic analysis he had made of the light curves of eighty variable stars, many of them the work of our own Variable Star Section. His demonstration from this piece of research that the Long Period Variables tend strongly to fall into two groups—in the first of which the phase of the third harmonic is nearly constant for all the members of the group, while in the second group the phases of the second and third harmonics can be tolerably connected by a simple linear relation—was of such fundamental importance that the address has become a classic in the literature of variable star astronomy.

In 1916 Phillips was inducted as Rector of Headley, Surrey, where he remained until his retirement owing to ill-health in 1941. The observatory had to be moved from Ashted; but this was successfully accomplished and two domes were set up at a distance of about fifty yards from the Rectory, one containing the 8-inch Cooke, a sidereal clock and a small transit instrument, the other Phillips's own 12½-inch Calver equatorial, with which he had previously replaced the 9½-inch altazimuth. The 18-inch With mirror belonging to the Association was also entrusted to him and was set up in the open on a rough parallactic mounting close to the two domes. At a later date—1927—this mirror was mounted on the equatorial of the 12½-inch in the larger of the two domes, as it was felt that it could not do justice to its fine qualities in its original situation.

In recognition of the magnificent work that he had already accomplished, the Royal Astronomical Society awarded to Phillips in 1918 the Jackson-Gwilt Gift and Medal. From 1919 to 1925 he served as one of the Secretaries of the Society, and during the sessions 1927-28 and 1928-29 he filled the Presidential Chair with that kindly and unassuming distinction that many of us knew so well.

The decade from 1920 to 1930 probably provided the busiest years of his life; for in addition to his parochial work and his duties as an officer of the R.A.S. and Director of the B.A.A. Jupiter Section he had assumed a large number of other exacting and overlapping responsibilities. At the



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beginning of this period a considerable demand was made upon his time and energy by the preparation and delivery in various parts of the country of courses of University Extension Lectures, which were the means of attracting many new recruits into the ranks of the astronomical fraternity. In 1922 he was nominated by the Archbishop of Canterbury as representative of the Church of England on the Commission which was to sit at Geneva to discuss the stabilization of Easter, and after this was a member of the Special Committee of six, which was set up for the consideration of Calendar problems in general. In 1925 he assumed the Presidency of Commission 16 of the International Astronomical Union, which dealt with all matters relating to the physical observation of planets, comets and satellites, an office which he did not vacate until 1935 and which involved a large amount of work and correspondence. But in spite of all that he had undertaken, his work at the telescope went on and the number of invaluable records that found their way into his observing books seemed to be undiminished.

In 1930 the Association fittingly elected Phillips to be the first recipient of the Walter Goodacre Medal and Gift in recognition, not only of his distinguished contributions to the science of astronomy, but also of all the time and care he had devoted to the interests of the Association. These continued unceasingly; and upon laying down the Directorship of the Jupiter Section in 1933, he immediately took under his charge the Saturn Section, of which he remained the Director until a few months before his death.

In 1942 he received his last honour, when the University of Oxford, in recognition of the many years which he had so untiringly devoted to scientific research, conferred upon him the degree of D.Sc. *honoris causa* on February 28, less than three months before his death. This tribute by his old *alma mater* he valued very greatly, and we must all be thankful that his health allowed him to attend the ceremony and receive his degree in person.

As an astronomer Phillips was first and foremost an observer. There can be no question but that he was the greatest observer of Jupiter there has ever been, as he was also the World's leading authority on all matters pertaining to the configurations and motions of the planet's surface features. Basing his main line of research upon the pioneer work of the late A. Stanley Williams, he made over 30,000 separate determinations of the longitudes of spots and markings, as well as a regular series of measurements of the latitudes of the belts and the profusion of beautiful sketches which adorn his observing books! At every opposition of Mars he contributed a wealth of notes and drawings, his attention being divided only if the two planets were favourably situated at the same time.

But it did not require one of the major planets to lure Phillips to his observatory. He was an assiduous observer of double stars and contributed to the *Monthly Notices of the R.A.S.* long lists embodying the results of his measurements. Such was his skill with the micrometer of the 8-inch refractor that he would measure the separation of pairs whose disks were almost in contact; yet among double-star observers, most of whom are equipped with instruments of considerably greater resolving power, there can be few who would not testify to the reliability of his results.

As a planetary draughtsman Phillips, in the writer's opinion, was unsurpassed. His accuracy was of the highest order. What Phillips drew he saw, and what he saw was there; one might almost add that what he did not see was not there—not in the telescopic image, at any rate. Confess, you who have had the privilege of observing with him; when you found

after comparing notes that you differed from him in some detail, which of you upon returning to the telescope was compelled to change his mind? Hand in hand with accuracy went the touch of the true artist; sharpness of detail achieved with a softness of tone that few could emulate; truth and beauty blended, with never a concession of one to the other.

Only by spending innumerable hours at the telescope could Phillips have accumulated the wealth of observational material for which we are so greatly indebted to him and which he discussed, largely in conjunction with the work of others, with the greatest care and the exercise of such exceptionally sound judgment. It was by working regularly on into the small hours and frequently until dawn that he accomplished so much. He seemed to require far less sleep than ordinary mortals, but was one of those fortunate people who can drop off at will at any time and in any surroundings. On the day following one of his long watches at the telescope he would often sleep for twenty minutes or half an hour after luncheon in a chair in his study, awaking perfectly refreshed and eager to continue the next night's work into the early hours.

It is not surprising that to so many amateurs in the British Isles the planets should have seemed to revolve around Headley, where there was always the kindest and most genuine welcome awaiting any inquirer into the mysteries of the heavens, were he the veriest tyro, eager for his first glimpse through a telescope, or the serious worker, come to share the rigours of an all-night session, and where both alike were sure to be infected with some of Phillips's boundless enthusiasm. Many are those whom by personal contact and untiring correspondence he has guided through their novitiate and whose feet he has planted firmly on the road that leads to achievement. These indeed will ever hold him in grateful and affectionate memory.

And who, from Astronomers Royal and learned Professors to the humblest owner of a 3-inch refractor, that has attended one of the "Annual Visitations" of the Headley Observatory on a Saturday afternoon in June, will forget the genial atmosphere and the eager welcome accorded them by Doctor and Mrs. Phillips, or the pleasant hours spent in and around the Rectory and the Observatory in their setting of peaceful Surrey countryside and summer flowers? These, however, were not the only occasions upon which famous scientists came to Headley, and in the Visitors' Book of the Observatory are to be found the signatures of many distinguished astronomers from all over the world.

Notwithstanding the magnitude of his astronomical commitments, the care of his parish took precedence over all; and if his parochial duties were not arduous, they were carried out with that punctiliousness and devotion that were so characteristic of him. It would be surprising to learn that he had missed even a choir practice in order to be at the telescope. Happy indeed must be the country parson who can feel that he has been so greatly revered and so deeply loved as Phillips by his little flock!

It was always a source of amazement to the writer how nothing on earth, or in the heavens, could prevail upon Phillips to prepare his Sunday sermon at any other time than between 8 P.M. and midnight on Saturday. However clear the sky or however admirable the definition, he would retire into his study for a couple of hours between these times and concentrate upon his discourse for the morrow. In vain one might point out earlier in the day that it was going to be a fine evening or suggest on a Friday that it would be a good thing to get that sermon out of the way; he was adamant and would insist that his mind was sterile at any other than the time which, from long habit, had come to be associated with the task. His notebooks

around with the entry "Saturday night; cannot remain longer in the observatory."

It was inevitable from his nature that he should make friends wherever he went, and countless astronomers on both sides of the Atlantic will feel his passing as a personal loss. Goodwill to all fellow-creatures and an unselfish delight in their pleasure were innate in him, while his kindness and forbearance with irritating and stupid people amounted almost to a fault; the hardest words the writer ever heard him use about a human being were that he was "a very difficult man." Two instances from the writer's own association with Phillips may be cited; they are trivial little incidents and can only have been retained in the memory because they were so typical of the man. He well remembers trying, when he was a very young and ignorant astronomer, on the first of his many memorable visits to Headley, to tell Phillips that the image given by a Newtonian reflector ought to be orientated as in a looking-glass! Instead of receiving the rebuke he deserved from one who had been using reflectors for years, he was invited most kindly—almost humbly, as if there were indeed a possibility that he might be correct—to come and have a look. On the occasion of the total eclipse of the Sun, which crossed England on 1927 June 29, the writer had the pleasure of taking Phillips to Leyburn in his car. The precious twenty seconds were cloudy, and two sadly disappointed astronomers followed the Great North Road homeward later in the day. Somewhere about Grantham an evening paper was procured, with headlines and a photograph proclaiming the success of the Greenwich party at Giggleswick, less than thirty miles from Leyburn. His companion was ready with an exclamation, such as "Confound our wretched luck! Why did we go to the wrong place?" when he was forestalled by a sincere and spontaneous "Oh, I am so glad they saw it!" from Phillips.

Although his parish and his astronomy occupied the greater part of his time, his other interests were many. A Fellow of the Royal Meteorological Society, he never forsook the science which had claimed his attention before he became an astronomer, and an unbroken record of rainfall and temperature was kept during the whole of his sojourn at Headley. Only a few weeks before his death he had completed an analysis of the monthly temperature means of these twenty-five years and had found a well-marked second harmonic, which he provisionally attributed to the distribution of cloudy periods, which would have had opposite effects on the temperature in winter and in summer. Among his other hobbies were sketching and botany, with an especial love of the wild flowers of Great Britain and the Alps. He was also fond of music and took a particular pride in the achievements of the Headley choir, which always obtained an honourable place in the annual competitions of the Leith Hill festival. He was enthusiastic about cricket, though unable to take an active part in the game owing to an early injury, and was often to be found at Lords or The Oval when an important match was being decided, while he was of course an ardent supporter of the parish eleven on the humbler village green at Headley.

Such was his affection for the countryside around the Rectory, in the preservation of which he took an active interest, that it could not be without sorrow that he contemplated his inevitable retirement. He loved every tree and every wild flower in the place, and in his observing books there are many references to the song of the birds in the early May mornings, whose chorus of greeting to the dawn was so often the recessional to one of his night-long vigils.

In January 1940 a sudden breakdown in health was followed by an operation which compelled him to remain for some weeks in hospital. But

he returned to Headley and was well enough to resume his duties, though at a physically slower pace than was compatible with his boundless energy of spirit. He decided that he could no longer do his work as he would have it done, and his retirement followed in January 1941, after he had been taxing his strength too severely for several months. Even then he insisted on remaining for another month, to help during the period of transition!

He moved to Walton-on-the-Hill, only two or three miles away, and was able to make occasional visits to the Observatory. But in spite of preliminary warnings from his heart, nothing could persuade him to give his body the rest it really needed, and after a brief final relapse he passed peacefully away in a room in his residence at Walton from which could be seen, through the trees, the spire of his beloved Headley, where he had lived and worked for so many happy years.

Astronomers all the world over will be mourning a distinguished colleague, and those more fortunate ones who could claim his friendship cannot but feel that something is gone from their lives which will never be replaced and the memory of which they will ever cherish.

The sympathy of all will go out to Mrs. Phillips and their son, Rev. John E. T. Phillips, who is a member of the Association.—B. M. P.