

**F.J.M. Stratton, DSO, OBE, TD, FRS, 1881–1960**

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The text (slightly shortened) of an address given at the request of the Council at the Ordinary Meeting on 1981 October 9, the centenary of the birth of F.J.M.Stratton (born 1881 October 16).

Today we commemorate one of the most remarkable members of the human race that any of us is ever likely to set eyes upon – one whom we must be proud and grateful to number amongst this country's astronomers.

A portrait of Frederick John Marrian Stratton as President of this Society hangs at this time beside the entrance to the Fellows' Room in Burlington House. Below it the Executive Secretary has listed the main historical facts of his career and we shall be recalling these in the next few pages. He was born 100 years ago this month in Birmingham; he died in 1960, just before entering his 80th year, in Cambridge.

In total, Stratton had greater direct personal influence than any other astronomer before or since – this I verily believe. Others have had more influence upon astronomical thought or have made more discoveries, and so have more prominence in history books. But in inspiring and encouraging in his own day both individual astronomers and astronomical organizations, national and international, those who knew him claim that there has never been anyone like him.

As a young man, Stratton had a brilliant record in Cambridge mathematics. But he was soon drawn to astronomy, first dynamical and then physical. He quickly came to the front in the heroic days of modern observational optical astrophysics. His book *Astronomical Physics* (1925) was the first professional textbook in the field; it is still admired by those who classify and interpret astronomical spectra in optical wavelengths. It shows how fully Stratton appreciated the significance of the great advances taking place in astrophysics at the time.

More especially, Stratton soon came to be recognized as the leader in the spectroscopic study of novae – in those days mostly not supernovae – and he made standard encyclopaedic contributions to the literature of the subject. Also, under his guidance, Nova Herculis 1934 became almost certainly the most observed star ever, apart from the Sun. Indeed, Stratton could be described as the custodian in his day of the *two* most observed stars. For he was a leading solar physicist, too, in the great days of eclipse expeditions – days that in fact owe much of their greatness to Stratton's enthusiasm and organizing skill. In this domain, at the eclipse of 1926 January 14 in Sumatra,

he had one outstanding personal success that led to his classic work (with C.R. Davidson) on the solar chromosphere. The next year he devoted his Halley Lecture to *Modern eclipse problems*. Meteorological ill-fortune beset his own subsequent persistent efforts with these problems, but he always played a vitally important part in arranging the expeditions of the more fortunate British observers.

Stratton had a prominent part in developing the Cambridge school of astrophysics. For nearly 20 years (1928–47) he was Professor of Astrophysics and, up to 1946, Director of the Solar Physics Observatory. For over a year before his retirement in 1947 he was the first Director of ‘The Observatories’ – the fusion of the University Observatory and the Solar Physics Observatory. Shortly thereafter, the University Press published Stratton’s beautifully written *The History of the Cambridge Observatories* (1949).

To return to his own directorship: administration has to be done, but to be good administration, administration must not be seen to be done. Stratton was the perfect administrator – he was never seen to do any. But that was because he did nearly all of it around midnight in his room in College. He never had a secretary; in this and all his other offices he wrote every letter in his own hand using real pen and ink. But if he was not seen to administer his colleagues and pupils, he certainly was seen to stimulate them to get the utmost out of Cambridge observing conditions. Above all he gave encouragement – unobtrusive in style but wonderfully efficacious in outcome – to young men who displayed astronomical inclinations. At one and the same time, for instance, the Astronomer Royal, the Astronomer Royal for Scotland and Her Majesty’s Astronomer at the Cape of Good Hope were all men in whose early careers Stratton had played a crucial part. And I wish there were time to tell of my own debt to him in this regard.

Then Stratton was almost certainly the greatest ever promoter of international co-operation in astronomy. He was General Secretary of the International Astronomical Union for a decade (1925–35); the Union owes to him much of its structure and very much of its ethos. He was the only member to attend every General Assembly from the first in 1922 in Rome to the tenth in 1958 in Moscow. In 1938 at Stockholm at the official banquet he expressed the thanks of the members to their hosts in 20 different languages, and in 1948 at Zurich, after the 10-year break in all such intercourse brought about by the war, he performed a similar feat in welcoming the delegates to its resumption. For many years the Union insisted upon re-electing him President of its Commission on the Exchange of Astronomers. All this prominence in international activity then caused him to be chosen to serve for no less than 15 years (1937–52) in the key rôle in international science of General Secretary of the International Council of Scientific Unions (ICSU).

In recalling under their main heads Stratton’s services to astronomy I have left to the last those that I think were nearest to his heart. They were all that he so joyfully and generously did in his lifelong devotion to the Royal Astronomical Society. He was Treasurer 1923–27, President 1933–35 and Foreign Secretary 1945–55. In each of these offices, and as a Council member for a total of about 40 years, he made characteristic contributions, many of

them benefiting the Society particularly through his unique acquaintance with the international scene in our science. And I ought also to recollect that the minutes of our former Geophysical Committee show what a lively interest Stratton took in fostering its work in its early years. As President, he always stands out in my memory especially for the gentle encouragement he exercised in putting even the most nervous reader of a first paper at his ease. Another service he gave was to be Editor of *The Observatory* 1913–25.

As Stratton approached the age of 70, his colleague, that good friend of us all, the late Arthur Beer planned a Festschrift of what was intended to be normal proportions for such an occasion. So great was the response he had from the world's astronomers, however, that he had a serious problem in finding a publisher for the two large volumes of *Vistas in Astronomy* that ultimately reached Stratton when he was 74. They gave him immense and entirely unexpected pleasure. And there was a pleasure within the pleasure, for on page 1 the astronomer E. Delporte, the discoverer of the minor planet numbered 1560, announced its having been named 'Strattonia'. Stratton pointed out to his friends that the published photograph showed it as small and quite round. He was a man of small stature and there had been a time in his life (actually a spell of ill-health) when someone remarked that, were he a shade taller, he would be a perfect sphere.

Stratton served British science outside astronomy amongst other ways in the arduous duties of General Secretary of the British Association 1930–35, a term that included the centenary year 1931. In a somewhat different sphere, he was Secretary of the Society for Visiting Scientists that for about a decade from 1946 at premises in Old Burlington Street provided inexpensive accommodation for scientists visiting London from all over the world in those difficult post-war years.

As researcher, professor and observatory director, officer of scientific societies, and as administrator of great international organizations, we thus see how Stratton led an unbelievably full life abounding in fruitful service to science and scientists throughout the whole world. Taken as a whole, it was surely on a scale that has never been equalled. But the half has not yet been told.

For well over half a century Stratton was a Fellow of Gonville and Caius College, Cambridge. It was his home all that time and he strove ardently for its well-being. From the end of World War I until he became Professor, he was a Tutor or Senior Tutor and so played a leading part in enabling his College to cope with the new generation of undergraduates, many of whom had been on active service in that war. Stratton was singularly qualified to win the respect of these men in those lively times, and his tutorship is still legendary in Caius. Later he served his term as President 1946–48. He had unparalleled knowledge of members of the College and he kept in touch with hosts of them over the face of the Earth. In his last years he produced two new volumes of the College *Biographical History*.

So far as international co-operation in astronomy is concerned, Stratton described war as an 'unmixed evil'. Nevertheless, from an early age he showed exceptional natural aptitude for military matters. He had an enduring

involvement with the Territorial Army and with the Officers' Training Corps in the University. Throughout World War I he was on active service with the Royal Corps of Signals. He displayed extraordinary fortitude and gifts of leadership. He was five times mentioned in dispatches, was awarded the DSO and the Croix de Chevalier, Légion d'Honneur, and rose to the rank of Lieutenant-Colonel. Between the wars he kept in touch with military affairs; also he did much for the well-being of ex-servicemen in Cambridgeshire. He received the Territorial Decoration in 1924, was appointed OBE in 1929, was made Deputy Lieutenant of the county in 1924 (becoming Vice-Lieutenant in 1945). He returned to the Army for the duration of World War II, again with the rank of Lieutenant-Colonel in the Signals. Most of the time he was on Special Duties, connected with radio security which took him to every corner of the globe. After the war he served a term as Deputy Scientific Adviser to the Army Council. Stratton thus achieved a military career far exceeding the aspirations of most professional soldiers.

Throughout his life Stratton was a member of the Unitarian Church; he helped to found its Congregation in Cambridge, and he was Chairman of that body for 50 years. He played a leading part in the affairs of his church throughout the country, and he was President of its General Assembly in 1948–49. In the same context he had a long association with Manchester College, Oxford, being at various times its Chairman of Council and its President; he was a Hibbert Trustee from 1925. His church paid tribute to the services he gave 'unstintedly' in all these ways.

Before going to Cambridge, as a youthful student in Birmingham, Stratton became acquainted with the well-known physicist Sir Oliver Lodge, and they kept in contact for the rest of Lodge's life. It seems to have been a consequence of Lodge's concern in such matters that Stratton developed what became a lifelong interest in psychical research, leading eventually to his being President of the Society for Psychical Research 1953–55. Clearly he felt a responsibility to examine the evidence with an unprejudiced, critical, scientific mind. He investigated a number of reported cases of what might be called abnormal phenomena. From what he told me the phenomena never presented themselves when he and his equipment were on hand.

We began by commemorating a greatly distinguished Fellow of our Society. We now find ourselves commemorating, as I say, probably the most astonishing human being that anyone here can have known. After Stratton's death, some of his closest associates in any of his activities had difficulty in accepting the revelation that he had had any other career, let alone some half-dozen others. And some, who had indeed been aware that there were all those careers, discovered how inadequate had been their appreciation of the scale of his achievement in even a single one of them. He has become for many the prototype ten-talent man. With zest and quiet enjoyment he employed to the uttermost every talent that had been entrusted to him. The way he made such effective use of his gifts was simply to work prodigiously hard, and to do everything with dedicated professionalism. As to his attitude towards himself, Sir James Chadwick, Master of his College and long-time friend, wrote, 'I cannot remember a single instance of his claiming credit for anything he had done, or even implying it.' As to his attitude towards others, Sir Richard

Woolley, his one-time pupil who became Astronomer Royal, wrote, 'He was never heard to speak evil of anyone at all.'

More than any man I have known, Stratton was made of the stuff that the saints are made of – at any rate according to my somewhat limited familiarity with such persons. Of course, Stratton would be aghast to hear me say this, but then to be pleased to be *called* a saint would be a fatal disqualification for *being* one. And I do hasten to recall that a martyr is one who has to live with a saint – as another friend pointed out. For, while Stratton would not ask anyone to do something he would *not* do, it would not occur to him that any friend of his might shrink from doing anything he *would* do—occasionally this could be taxing, even if also flattering.

Stratton's goodness was exercised in countless acts of doing good by stealth as well as in the splendid services he gave to his church, his country, his college, his science and therein especially to this society. He did come to be summoned to offices of much distinction, but be it well noted that all were distinguished for the demands they made, rather than for any personal glory they bestowed.

One hundred years after Stratton's birth, and more than 20 years after his death, the number of those who knew him well is bound to be few. But of about 200 scientists whose signatures appear on the fly-leaves of the Stratton volumes of *Vistas*, more than a third are still with us. It is my privilege to speak particularly on behalf of these, and any others like them, to pass on to our successors as much as we can of the inspiration of the life and work of the one we all came to know as 'Chubby' Stratton. I quote words that, I know, all these persons would wish to echo. In 1955, at the end of his Introduction to *Vistas*, Arthur Beer wrote of his contact with Stratton's 'radiant and inspiring personality'; he said 'it is an experience which I cherish more deeply than I can readily express and which I consider to be one of the greatest gifts of my life'.