

**OBITUARY**

---

**MARTIN DAVIDSON**

The Rev. Dr Martin Davidson, who died on 1968 June 25, was a member of the Association for more than fifty years, and although few of our present members will have known him, he was once a familiar figure at all B.A.A. meetings. He was born at Armagh, Northern Ireland, in 1880, and attended school at Moy, whence he won a scholarship to Queen's University, Belfast, graduating B.A. in 1901. He was ordained in 1904 and for the next ten years worked as a curate in the East End of London. He took a London B.Sc. degree in 1909 as an External Student and in 1914 was awarded his M.Sc. degree (Belfast); at the outbreak of war he was appointed Chaplain to the Forces.

During the pre-war period his interest in astronomy became apparent, and he joined the B.A.A. in 1911 and was elected a Fellow of the R.A.S. in 1914. Almost immediately on joining the Association he was appointed Director of the Meteor Section, and continued to direct this work (with the exception of the war years) until 1921. At that time the naked-eye observation of meteors was almost the sole source of information on this subject, and Davidson's detailed reports were of considerable value. In 1921 he was appointed Vicar of North Ormsby in Lincolnshire, and in 1925 became Vicar of Holy Trinity, Canning Town, an office which he held until his retirement in 1953. During the first ten years in which he held these more responsible posts, his output of astronomical work was greatly reduced, but in 1931 he gained his Doctorate (Belfast) and the years that followed proved to be his most active.

Davidson was appointed Treasurer of the B.A.A. in 1933, and held that office until 1936, when he succeeded the Astronomer Royal as President of the Association. He also served on the Council of the R.A.S. from 1938 to 1943 and again from 1944 to 1949, and he was Vice-President of the Society from 1946 to 1948. He seems now to have turned his attention to comets, and was Director of the Comet Section of the B.A.A. from 1939 to 1945. It is a tribute to his remarkable energy to recall that during those war years when he was Vicar of a parish in the target area of London's dockland, he still found time to write many papers for the *Journal*, to issue all the B.A.A. *Circulars* (1939 to 1946), to serve on both Councils, and to produce reports on comets under conditions in which an almost total lack of communication prevailed in the scientific world. After the war increasing deafness made his attendance at meetings more difficult, but he was present at the October meeting in 1948 to receive the Walter Goodacre Medal in recognition of his services to astronomy and to the Association during his many years of membership. On this occasion the President (F. M. Holborn) paid a personal tribute to Davidson for his unfailing support during those difficult years. On the following day the Lorimer Medal of the Astronomical Society of Edinburgh was presented to Davidson

for his books on astronomy and for his work over many years for the B.A.A. It is a condition of this award that the recipient should give a lecture to the Society, and Davidson spoke on Comets. This was probably his last appearance at an astronomical meeting, although he was present at the eclipse expedition to Sweden in 1954.

Davidson was the author of more than a dozen books, mostly on elementary astronomy or physics, and one of these, *Elements of Mathematical Astronomy*, which also contains a brief exposition of relativity, has run to three editions, the last being a revision by Dr Cameron Dinwoodie in 1962. Davidson was also the Editor of *Astronomy for Everyman* (1953), a compendium of articles, many of which were written by Directors of B.A.A. Observing Sections. For more than forty years he wrote papers and reports for the *Journal* and *Monthly Notices*, and although most of these dealt with meteors or comets, he was interested in any sort of problem, especially a mathematical one. Thus he wrote on the Moon and the tides, the gyroscope, atomic physics, the stability of the Earth-Moon system, occultations and eclipses; and during the war years, when the subject of Free Will or Determinism became a matter of interest, he was equally ready to expound his own views, and wrote books on this subject also. His Presidential addresses dealt with the Origin of Comets and the Origin of the Solar System; his last paper in 1956 was an investigation into the theory of the deflection of a ray of light in the Sun's gravitational field.

To assess the value of Davidson's work it is necessary to consider the conditions which existed in those early years when his output was at its peak—the years of economic depression before the second world war. The membership of the B.A.A. had fallen to little more than 800, but interest was still there and Davidson was one of the band of enthusiasts (one can recall Phillips, Holborn, Peek, Sellers, Steavenson and Crommelin among others) who managed to keep things moving. Davidson's unfailing good humour in debate, his readiness to answer questions clearly and promptly and his grasp of difficult concepts—all these were invaluable and made a considerable impression. But it was in the field of computing that his work had a lasting effect. Although always an amateur in his outlook, his early papers on meteors and comets often contained something new. He had a gift for turning an equation into some other form which was more readily intelligible; it may have been unconventional, but it worked, and it made matters clear to the beginner. Above all, he had a very different approach to such mathematical subjects. There were no electronic computers in those days, and even in the late 1940s, punched-card machines were almost the highest ideal in rapid calculations. But such machines could not readily handle trigonometrical expressions, and it was necessary to convert all of the formulae into some other form, generally using rectangular co-ordinates. Comrie was perhaps the leading exponent of these new methods and Davidson entered the field with his usual vigour. While most computers were still using seven-figure logarithms, he was one of the few then using a desk calculating machine (which he later presented to the Association), and many of his papers were directed towards the use of machines rather than tables. Thus

his paper on the parabolic orbit of a comet in *Memoirs*, **30**, part 1, gave the formulae for the first time in a form suitable for machine use, and such formulae are still employed today. Perhaps the greatest impact which his work made on the B.A.A. came with his paper on the method of computing the heights and path of a meteor (*Journal*, **46**, 292). The simple equations involved in this method avoided the extensive use of trigonometrical tables, and the Computing Section at once adopted it. For some years many members of the Section were engaged in reducing the hundreds of observations which were being made by Prentice and his fellow-workers; the method was subsequently extended to deal with multiple observations and with the orbits of meteor streams.

In his later years Davidson's articles became fewer and he contented himself with writing reviews and answers to correspondents; he was always ready to answer questions promptly and if the topic was sufficiently interesting he would publish a note on the subject. His last years were spent very quietly and his health finally broke down in 1965. He is survived by his widow and three sons.

J. G. PORTER

## NOTES FROM OTHER JOURNALS

---

FROM: *Astrophysical Journal*

Volume 153 of *Astrophysical Journal* contains reports of some interesting solar work. Buhl and Tlamicha (L. 189, 1968 September) have found, with measurements at 2 cm, a Quiet-Sun temperature of around 9 000 °K. Castelli, Aarons and Michael report on the largest solar radio burst ever recorded, on 1967 May 23, while in the following paper in the same issue Hagen and Barney discuss a model for the first stages of a radio burst, the picture being of a hot, dense mass of plasma rising through the chromosphere (p. 267 and p. 275 respectively, 1968 July). On a related topic, Susan McKenna-Lawlor identifies and describes three varieties of solar flare; this will probably be of particular interest to Solar Section members (p. 367, 1968 August). There is also an interesting paper on turbulence in the solar wind (Coleman, p. 371, 1968 August).

In contrast we are rather low on planetary work this quarter, though there is the usual crop of papers on atmospheres; there is more about the Martian CO<sub>2</sub> abundance from Giver *et al.* (p. 285, 1968 July) and Belton and Hunten, whom