

Obituary

John R. Smith, 1924-1998

The BAA and the field of radio astronomy suffered a heavy loss at the end of October, 1998, when John Smith finally lost his long battle with cancer. He will be greatly missed not only by his family and extensive circle of friends, but also by many amateur and professional astronomers around the world.

John was unique, but also typically British. He was a quiet, largely self-taught man, who preferred quietly to do his own thing. However, this did not stop him earning positions of recognised expertise in both his professional career and his private interests. He was a Member of the Institute of Electrical Engineers, with a special interest in the problems of power distribution. He contributed substantially to a number of books and reports on this subject. He played a leading role in the design and implementation of the 400kV Supergrid system. Within the power distribution industry he was known not as a man who used the rules and test procedures, but as the person who wrote them.

His private interests were split between electronics and astronomy. He served in the Army during the Second World War, and when not otherwise engaged, used his skills to make radios for his fellow soldiers. With an eye to his hobby activities after the war, he spent spare time collecting lenses, meters and other items. Even today, some of the meters in his Radio Astronomy shed are marked in Japanese. When he returned to England, he needed the help of several other soldiers to unload his collection. One of his big regrets was that he could think of no way to bring home one of the German 10m diameter Wurzburg antennas. These make good

radio telescopes and can be seen even these days at various radio observatories.

His interest in astronomy was as much technical as observational. He produced many examples of electronic astronomical instrumentation, such as photometers and apparatus for detecting Transient Lunar Phenomena. He also produced a number of optical telescopes. He made at least three computers, designing them from scratch, and in the 1970s he made an electronic data logger that recorded its output on punched tape.

When he started in radio astronomy in the 1950s, there were few books and little test equipment available. In addition to making radio telescopes, he had also to make the test equipment needed to set up and calibrate them. One of the more expensive items needed by the amateur radio astronomer is a paper strip-chart recorder. John solved the problem from scratch, by designing and building his own.

His radio telescopes ranged from, in the beginning, a small Yagi antenna pointed manually at the Sun, on to interferometers comprising small parabolic cylinders a couple of metres in size, then to a much larger parabolic cylinder, 4m wide by 20m long. His most ambitious project was a ten-metre diameter, computer-controlled, parabolic dish intended for making a survey of the Northern Celestial Hemisphere. One of his designs was used in Canada to develop the largest amateur-built radio telescope in the world.

An achievement of which he was most proud was his use of radio telescopes he had made to make regular daily measurements

of the Sun's radio emissions over more than three solar activity cycles. He died while his sky survey was in progress, so his family and friends are completing it.

In the BAA, he was one of those who, in 1957, worked with John Heyward to set up what was then called the 'Radio and Electronics Section', which primarily concerned itself with radio astronomy, but also made radio observations of the first artificial satellites. He was the first in the Section to make a working radio telescope, and to dedicate it to a long-term observing programme. In 1963 he was a recipient of the Merlin Medal and Gift for contributions to amateur astronomy.

Upon John Heyward's standing down in 1964, John Smith became Director of the Section, which was then renamed the 'Radio Astronomy Section'. He did not seek this position, since his attitude was always to encourage by example, and to spend as much time as possible actually doing astronomy. However, his approach was very effective in attracting new amateur radio astronomers into the community.

Especially memorable were the annual 'Section Meetings', usually held at John's house. These consisted of a short 'paper meeting', followed by a day or so of discussions of astronomy and radio astronomy hardware, and long sessions checking out and discussing each other's latest electronic creations. John taught by example.

By the time John Smith took over the Section, technology and expertise had improved to the point where the Section could focus less on technical development itself, and more on the construction of radio telescopes with an eye to making serious observations. The technical demands of radio astronomy made the appearance of new amateur radio astronomers quite slow, but in a few years John had built up around him a small circle of people who were making regular observations of solar activity. At its height, about a dozen observers were submitting regular reports of many manifestations of solar activity that can only be observed by radio. These were published in regular reports in the *BAA Journal*. He made no secret about not liking being a Section Director, but everybody in the Section feels he did a very good job. He continued to hold the position until 1977, when he resigned in order to spend more time with his own projects.

Although John would try to disavow it, he did more than anyone to build amateur radio astronomy in the BAA, in Britain, and in other countries, especially Canada. His legacy is a small circle of enthusiasts ▶



John Smith (left) in his garden with Dr Paul Williams and the 10m dish. (Photo courtesy T. J. Wright)

► around the world, building and operating radio telescopes, and encouraging another generation of back-garden radio astronomers.

In 1987, while visiting Canada, John spent some time working with Grote Reber, who started the whole science of radio astronomy. Grote was in Canada to make observations of very low-frequency radio waves from space. These men, with their roots in amateur activities, largely self-taught, became friends immediately, and worked so intensely together that Grote and John stories are still circulating around the astronomical community. On a later visit, John participated in a long series of tests and measurements being made on the 26-metre radio telescope at the Dominion Radio Astrophysical Observatory, which he then used for making observations of extragalactic radio sources.

Despite the increasing size of his commitment to radio astronomy, he found time for other kinds of observation. In his garden is a Coudé telescope that he used to observe

the Sun and planets. It directed the light to an optical bench where eyepieces, spectrographs and other equipment could be set up. Further down the garden a small dome houses a 40cm Newtonian telescope. He also spent a considerable amount of time working with the Guildford Astronomical Society, helping them to set up their observatory at Holmbury St Mary.

To those of us who were privileged to know and work with him, our best memory will be of John working quietly in the shed, surrounded by equipment he designed and made, with the 10m dish scanning the sky, and the universe whispering quietly in the background.

John leaves behind Joan, his wife, Sally and Peter, their daughter and son, a lot of friends, and a healthy and productive area of amateur astronomy.

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