

## Professor WILLIAM B. THOMPSON: 1922–1995

We record with sadness the death of Bill Thompson, a former Associate Editor of the *Journal of Plasma Physics*.

Bill was born in Belfast in 1922, but spent his student years in Canada. He took B.A. and M.A. degrees at the University of British Columbia, Vancouver. In 1947 he moved from there to the University of Toronto to work for a doctorate; initially he intended to become a relativist, under Leopold Infeld, but eventually he worked on magnetohydrodynamics under Edward Bullard.

On completing his Ph.D. in 1950, he returned to the U.K. to work on fusion at Harwell, eventually reaching the rank of Deputy Chief Scientist. At that time, fusion research was secret, but it was declassified in 1958, following the famous Geneva Conference. This resulted in the U.K. Atomic Energy Authority establishing a new laboratory for fusion, at Culham, to separate the work from Harwell. This opened in 1961, with Bill as the Head of the Theory Division. His pioneering text, *An Introduction to Plasma Physics* (Pergamon Press, Oxford), appeared in 1962. Bill was keen to ensure that plasma physics should be taught and researched in universities, an idea that was taken up at nearby Oxford University, which established a Chair of Theoretical Plasma Physics. Bill left his post at Culham on election to the Chair in 1963. For the next two years he promoted the subject at Oxford, while still being closely associated with Culham.

During the years 1958–1965, Bill was a very conspicuous figure in U.K. plasma physics. I personally met and heard him frequently at various meetings, being at first a graduate student and later a junior academic. I was very grateful for the advice and encouragement he gave me, and for his ebullient enthusiasm, and I am sure I was far from being alone in that respect.

Meanwhile, the University of California had decided to establish a general campus at San Diego, building upon the existing Scripps Institute of Oceanography. This opened in 1965. Here, too, there was a plasma physics presence in the locality, namely General Atomic, with no less a figure than Marshall Rosenbluth among a distinguished group. Not surprisingly, Bill was much attracted to this, as well as to the more benign climate of California, so he accepted an appointment at U.C.S.D. to be a founder member of the Physics Faculty. There he remained for 25 years, working tirelessly for physics as a whole, physics education and plasma physics. He took a turn as Chairman of the Physics Department.

Readers and contributors of this *Journal* have good cause to be grateful that, as one of his last acts before leaving England, he agreed to be an Associate Editor of the *Journal* from its inception, a post he retained until his retirement. As Editor, I was delighted to enjoy a continued and agreeable collaboration with him. I also made two sabbatic visits to U.C.S.D., in 1970 and 1977, in which we renewed our scientific and personal associations. In his office, he teemed with ideas about plasmas and fusion; at home, the house teemed with music and music-makers. For me he was a fellow spirit, in a way that seemed almost larger than life.

The mainstream of Bill's research was of course in basic plasma physics, and

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magnetic fusion. He worked on the basis of MHD, the calculation of transport coefficients, heating, instabilities, diffusion, relativistic kinetic theory, counterstreaming plasmas, resonances, toroidal systems and guiding-centre plasmas in two dimensions. Besides his 1962 book, already mentioned, his interest in exposition is borne out by reviews such as summer school lectures, and an important 1976 review on magnetic confinement. He also wrote in a number of other fields, including cosmic rays, the origin of terrestrial magnetism, planetary dynamics, antimatter, space science diagnostics and oceanography.

Bill retired in 1990, but continued with many of his previous activities. On 17 October 1995 he went for a swim at Scripps pier, a place close to both U.C.S.D. and his home, and familiar to anyone who knows U.C.S.D. Tragically, he was accidentally drowned there.

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JOHN DOUGHERTY