

Professor FRANZ D. KAHN: 1926–1998

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

Franz was born in Germany in 1926, but his family emigrated to England in 1938. He attended Oxford University, obtaining First Class Honours in Mathematics in 1947, and continuing as a research student there, eventually gaining his D.Phil. in 1950. His thesis work already involved him in plasma physics, under one of the pioneers of the subject. His supervisor was Sydney Chapman, and his topic was that of the production of plasma by solar flares, and its interaction with the Earth's atmosphere. This field had already been opened by Chapman and a previous pupil, Vincent Ferraro, in the 1930s. The idea had originally been phrased in terms of 'corpuscles', i.e. energetic ions and electrons, but it had gradually been realized that electrostatic forces give such a medium a coherence, so that it should be described as a fluid, notwithstanding the lack of collisions. This is of course the basic idea of plasma physics, and when the importance of magnetic fields was included, one had all the ingredients of magnetohydrodynamics.

Before he had quite finished his doctorate, Franz moved to Manchester University in 1949, where he spent the rest of his working life, being for many years a Professor of Astronomy and, after 1993, Professor Emeritus. His early training in solar–terrestrial relations broadened into astronomy of all kinds, including stellar structure, galactic physics, quasars, pulsars, stellar winds, magnetospheres, and the effects of the ubiquitous dust.

Several of his contributions, mainly in his earlier years, involved plasma physics. Among other things, he was interested in instabilities. In particular, he investigated the possibility that an unmagnetized plasma with anisotropic distribution in velocity space might be unstable to electromagnetic waves although stable to electrostatic disturbances, following an earlier discussion by E. S. Weibel in 1959. The result was a pair of papers (*J. Fluid Mech.* Vol. 14, p. 321 (1962) and Vol. 19, p. 210 (1964)) that offered a very comprehensive investigation of the question.

When the *Journal of Plasma Physics* started in 1967, Franz accepted an invitation to be an Associate Editor, and served in that capacity until 1988. I much appreciated his help with the areas of plasma physics that are connected with astronomy and geophysics, and I am sure that those of us who, as authors and referees, came into correspondence with him as a result will recall with affection his enthusiasm and wisdom.

Franz enjoyed a successful academic career, becoming FRS in 1993, and was enjoying his retirement. His modest and serene manner tended to conceal his achievements and reputation. He enjoyed and appreciated England and Manchester. He had enjoyed his family life most of all, but had to endure the sudden and early death in 1981 of his wife, Carla. His own death also occurred very suddenly, on 8 February 1998.

JOHN DOUGHERTY
Editor of *Journal of Plasma Physics*, 1967–1994