

Envoi

J. P. DOUGHERTY

Department of Applied Mathematics and Theoretical Physics, University of Cambridge,
Silver Street, Cambridge CB3 9EW, U.K.

I shall shortly be stepping down from the position of Editor of *Journal of Plasma Physics*, although continuing for a while more as an Associate Editor.

The origins of plasma physics are of course ancient, starting with such things as lightning, auroras, progressing to the kind of technology involved in the discovery of X-rays and of the electron near the turn of the century, continuing with the pioneering work of Irving Langmuir in the 1920's, followed by Lev Landau's historic 1945 paper on plasma oscillations. However it seems to me that 1958 was a seminal year, for it saw the declassification of fusion research and the famous Geneva Conference. In the same year came the discovery of the Van Allen radiation belts and the rapid expansion of geophysical plasma physics resulting from the availability of space satellites. Plasma physics and its applications grew rapidly in the following years, and so of course did the publications, for which journal space had to be found.

Meanwhile, Professor George Batchelor had, in 1956, founded the *Journal of Fluid Mechanics*, and by the early 1960's perceived that the burgeoning subject of plasma physics was occupying an increasing proportion of the submissions. With characteristic foresight, he decided this had better be stopped sooner than later, and invited me (inexperienced as I was) to help to establish the *Journal of Plasma Physics* by fission, as it should perhaps be called, from his journal. So, with the assistance of Cambridge University Press, the first issue of *Journal of Plasma Physics* appeared in January 1967, with myself as Editor.

For more than a quarter of a century, I have been privileged to observe, from the Editorial seat, the development of the subject. It has been less spectacular than microelectronics, superconductivity, or molecular biology (to name only a few). Nevertheless controlled fusion has taken place, solitons have been explored, chaos has been invoked, and a whole menagerie of instabilities has been revealed, with names like sausage, balloon, banana, hosepipe, and so on. *Plasma Physics* has been noted for its internationalism, and while that might seem natural for science nowadays, and obvious in the context of huge and costly reactor projects, it is a feature that can be traced to the very earliest days.

The task of editing a journal like the *Journal of Plasma Physics* is a correspondingly international one, and this is a feature that I have particularly enjoyed. Any specialist journal creates its own 'invisible college', composed of those taking part as authors or referees, or in most cases both. The 'college' has impressed me as being both a serious and a friendly one. A useful role for an editor is to try to introduce and welcome newcomers, and I hope that I have contributed here. Plasma physics has suffered from an alternation of feast and famine in funding (some would say that the word 'feast' is too generous), and this creates problems for everyone, including commercially operated journals.

The communications revolution is greatly influencing scientific publication and calls for reconsideration of the task of journals such as this one. Will there

even be a role for archival refereed journals? Can we not merely store all this work on CD's (or whatever) instead of maintaining libraries with handsomely bound and shelved paper copies? And is there now any merit in paper publication after a delay of a few months when computer bulletin boards and the like can convey the source code to the interested reader within minutes? These are important questions, but it is not for a retiring Editor to attempt an answer. I have certainly found in recent years that pursuing journal correspondence by email has advantages in convenience and immediacy; as the correspondence between scientists (even Editors) is one of the staple sources for historians of science, I fear that future historians will regret that innovation.

I am truly delighted to be able to announce that my successor is to be Professor R. A. Cairns, of St Andrew's University, Scotland. Alan has a great reputation on the subject, and I know will be a great Editor. Professor George H Miley of the University of Illinois at Urbana will join him as North American Editor. I wish both all success, and I know you will all want to continue to support the journal with them at the helm.

It is difficult for me to thank all the people that I should thank in respect of so long a period, with the risk that if I start naming them I shall offend by omission. I received much support from the three founding Associate Editors, Dan Bershader, Franz Kahn and Bill Thompson, who retired only fairly recently. Their successors have continued this, and are happily still all in office. My University Department has generously housed this activity (as indeed it does for a number of journals), and a succession of secretaries have given assistance. The publishing and printing staff at Cambridge University Press have been excellent colleagues, and I would mention especially their long-serving Journals Liaison Officer, Mr Peter Mott. Scientific copy preparers have maintained the high standards of consistency, appearance and literacy that contribute much to a journal, and I thank the first and third of these, Bill Stewart and Mac Clarke for their service. What about the second, you will ask? I can now reveal that my wife, Margaret, served the journal in that capacity in 1976–87, and I take the opportunity to thank Margaret, not only for copy-editing, but for her understanding throughout the whole of my term as Editor, especially when my task reduced the time available for family activities.

Above all, I wish to thank very sincerely all the authors and referees who have contributed to the success of the *Journal of Plasma Physics*. I wish you all continued, and enhanced, success.

JOHN DOUGHERTY