VOLUME 19 · PART 2 · APRIL 1978

JPLPBZ 19 (Pt 2) 193-324 (1978) 0022-3778

JOURNAL OF PLASMA PHYSICS



CAMBRIDGE UNIVERSITY PRESS

JOURNAL OF PLASMA PHYSICS exists for the publication of experimental and theoretical research papers on plasma physics and its applications.

EDITOR

DR J. P. DOUGHERTY

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

ASSOCIATE EDITORS

PROF. D. BERSHADER Department of Aeronautics and Astronautics, Stanford University, Stanford, California 94305, U.S.A.

PROF. F. D. KAHN Department of Astronomy, University of Manchester, Manchester M13 9PL, England

PROF. W. B. THOMPSON Department of Physics, University of California, La Jolla, California 92093, U.S.A.

Authors wishing to have papers published in the JOURNAL should communicate them to any one of the persons named above, choosing one in their own country where possible.

Authors are urged to ensure that their papers are written clearly and attractively, in order that their work will be readily accessible to readers.

Manuscripts should be typed in double spacing on one side of the paper only, with references listed at the end in alphabetical order of authors. Drawings should be done in Indian ink on plain white or transparent paper, and should not be larger than 15 in. by 24 in. Lettering should be shown clearly in pencil for reproduction by the printer, and as far as possible information relating to a figure should be placed in the caption rather than on the figure. A typed list of captions should be provided at the end of the manuscript. Proofs of papers from overseas will usually be despatched to authors by airmail. There is no charge for publication. Authors are entitled to receive 50 offprints of a paper in the JOURNAL free of charge, and additional offprints can be purchased if ordered in advance.

© Cambridge University Press 1978.

For permission to reproduce material from *Journal of Plasma Physics*, please apply to the London or New York office of the Cambridge University Press.

ISI Tear Service, 325 Chestnut Street, Philadelphia, Pennsylvania 19106, U.S.A. is authorized to supply single copies of separate articles for private use only.

JOURNAL OF PLASMA PHYSICS is published once every two months in February, April, June, August, October and December, by Cambridge University Press, P.O. Box 92, London NW1 2DB and 32 East 57th Street, New York, N.Y. 10022.

Three parts form a volume. The subscription price (which includes postage) of Volumes 19 and 20 (1978) is £36.00 net per volume (US \$80.00 in the U.S.A. and Canada) for institutions; £18.00 (US \$40.00) per volume for individuals. Single parts cost £15.00 each (US \$33.50 in the U.S.A. and Canada) plus postage.

Copies of the journal for subscribers in the United States of America and Canada are sent by air to New York to arrive with minimum delay.

Second class postage paid at New York, N.Y.