## JOURNAL OF PLASMA PHYSICS

Vol. 1 Part 1 February 1967

## CONTENTS

Cerenkov and cyclotron instabilities in a plasma stream	
C. F. KNOX	page 1
Dispersion of the whistler mode for a velocity distribution with a loss cone	
A. C. DAS	29
Gas-ionizing shocks in a magnetic field	
M. D. COWLEY	37
Non-linear constant-profile plane waves in a cold plasma under an applied magnetic field	
YVES J. ALLOUCHERIE	55
Resonant particle instabilities in a uniform magnetic field	
C. F. KENNEL and H. V. WONG	75
Resonantly unstable off-angle hydromagnetic waves	
C. F. KENNEL and H. V. WONG	81
Quasi-linear theory of the loss-cone instability	
A. A. GALEEV	105
Ambipolar diffusion and drift of added carriers in a semi- conductor in the presence of a magnetic field	
C. D. MALDONADO	113
The structure of quasi-shocks in a collision-free plasma in a magnetic field	
J. G. CORDEY and P. G. SAFFMAN	129
Combined Taylor and Helmholtz instability in hydromagnetics including Hall effect	
S. P. TALWAR and G. L. KALRA	145
Review	
Plasma Diagnostic Techniques	156

## CAMBRIDGE UNIVERSITY PRESS

BENTLEY HOUSE, 200 EUSTON ROAD, LONDON, N.W.1 AMERICAN BRANCH: 32 EAST 57TH STREET, NEW YORK, N.Y. 10022

> Subscription per volume of four parts £7 in U.K. (\$24.50 in U.S.A.) Single parts £2. 10s. (\$8.50)

Printed in Great Britain at the University Printing House, Cambridge