

CONTENTS

Preface		
<i>Rolf K. M. Landshoff</i>		v
 <i>SECTION 1 KINETIC THEORY</i>		
Adiabatic Invariants in the Motions of Charged Particles		
<i>S. Chandrasekhar</i>		3
Hydromagnetic Basis for Treatment of Plasmas		
<i>M. Rosenbluth</i>		23
 <i>SECTION 2 CONFINEMENT AND INSTABILITIES OF A PLASMA</i>		
Mechanism of Ion Acceleration by Dynamic Pinch Instabilities		
<i>S. Colgate</i>		35
Experimental Studies of the Pinch Effect		
<i>H. J. Karr</i>		40
Confinement of a Plasma Column by Radiation Pressure		
<i>E. S. Weibel</i>		60
Plasma Instability in the Interplanetary Magnetic Field		
<i>E. N. Parker</i>		77
 <i>SECTION 3 HIGH-SPEED FLUID DYNAMICS</i>		
Experiments Using a Hydromagnetic Shock Tube		
<i>V. H. Blackman and B. Niblett</i>		87
Velocity Measurements in Magnetically Driven Shock Tubes		
<i>S. W. Kash, J. Gauger, W. Starr, and V. Vali</i>		99
Magnetic Channeling of a Strong Shock		
<i>F. R. Scott, W. P. Basman, E. M. Little, D. B. Thomson</i>		110
Hydromagnetic Effects in Couette and Stokes Flow		
<i>H. W. Liepmann</i>		117