

CONTENTS

Preface	
Opening Remarks	M. J. LIGHTHILL
Collision-Free Shock Waves	
.....	K. NIU 3
Turbulent Shear Flow of Continuum Plasma	
.....	P. M. CHUNG and T. J. MARCISZ 25
Investigation of Ion Waves	
.....	J. M. DAWSON, W. L. KRUER and B. ROSEN 47
Weak Nonlinear Magneto-Acoustic Waves in an Inhomogeneous Plasma	
.....	T. KAKUTANI 63
Turbulent Process in Shock Waves	
.....	C. YAMANAKA, S. NAKAI, J. MIZUI, M. MATOBA and K. UEDA 67
Effect of Dissipation due to Firehose Instability on Half-Jet Flow of a Collisionless Plasma	
.....	S. MORIOKA and J. R. SPREITER 83
Recent Developments in Strong Shock Wave Research	
.....	R. A. GROSS 91
Computational Study of Shock Waves	
.....	C. K. CHU 101
Shock Wave Production of Relativistic Plasmas	
.....	R. TAUSSIG 113
Interaction of a Strong Shock Wave with Electromagnetic Field	
.....	Z. MUCHA 131
Structure of Almost Collisionless Shocks in a Magneto-Plasma and the Ion-Acoustic Instability	
.....	L. C. WOODS 145
Experiments of Shock Waves in a Fully Ionized Plasma Flow	
.....	K. ADATI, N. ASANO, J. FUJITA, S. HAMADA, K. MURAOKA, S. SHIMAMURA and T. TANIUTI 153
The Initial Stages of a Pre-Ionized Linear Theta-Pinch Plasma	
.....	J. IRVING, W. M. DEUCHARS and I. THOMSON 161
Shock Waves within the Two Fluid Model in the Presence of the Magnetic Field	
.....	R. V. DEUTSCH 167

Flow with Solid Boundaries	TH. PETERS	189
Magnetic Sheath Adjacent to Absorbing Surfaces	S. H. LAM	193
Laminar Boundary Layers in Low Pressure Argon Plasma	P. VALENTIN, M. TERRIER, P. VERVISCH and G. PIAR	207
Continuum Thick Sheath Probe Studies in Hypersonic Ionized Boundary Layers	K. J. TOURYAN and D. W. BOYER	223
A Review of Electrostatic Probe Response in a Flowing, Low Density Plasma	L. TALBOT	235
Measurement of Nonisotropic Electron Velocity Distributions by Laser Scattering	C. R. PHIPPS, JR. and D. BERSHADER	257
Electromagnetic Interactions with Turbulent Plasmas	H. GUTHART and K. A. GRAF	285
Experimental Study of a Supersonic Flow of an Ionized Gas	A. LASEK	303
Behavior of a Positive Probe in High-Speed Collision-Free Plasma Flow	J. TAILLET, A. BRUNET and G. FOURNIER	317
Experimental Investigations on Arc-Heated Steady Plasma Flow	T. YOSHIKAWA and T. MURASAKI	329
Penetration and Crossing of Transverse Magnetic Field Barrier by a Purely Ionic Plasma	M. BARIBAUD, J. M. DOLIQUE and F. ZADWORNY	347
Streaming Plasma Interaction with Variable Longitudinal Magnetic Fields	J. G. SIAMBIS, B. W. JOHNSON and W. R. KRAMER	355
Plasma Wind Tunnel for Magnetohydrodynamics	K. KURIKI, M. INUTAKE and J. SUZUKI	363
Formation and Decay of Vortex Filaments in a Plasma Current Sheath	W. H. BOSTICK, V. NARDI and W. PRIOR	375
Increase of the Velocity of a Reflected Shock after Dissociation Relaxation in Molecular Cl_2	W. LOCHTE-HOLTGREVEN and G. PIETSCH	393
Theoretical and Experimental Research on the Electromagnetic Acceleration of Shock-Induced Flow in Argon	M. IWASAKI and K. SHIBATA	397

Linearized MPD Jet and Channel Flows in External Magnetic Fields with the Hall Effect	K. ROBERT	413
Interaction of an Ionized Argon Flow with Electric and Magnetic Fields	B. FORESTIER, B. FONTAINE and J. VALENSI	423
Expansion of a Plasma from a Spherical Source into a Vacuum	J. M. GOLDFINCH and D. C. PACK	441
Corner-Expansion Flow of Ionized Argon	I. I. GLASS and O. IGRA	449
On the Flow of a Nonequilibrium Ionized Gas Past a Wall in the Presence of a Magnetic Field	K. KUSUKAWA and T. TAKAHASHI	461
Some Electrodynamic Flows with Curved Streamlines	E. G. BROADBENT	483
Interaction of Plasma Streams with a Neutral Gas Cloud	H. KUBO, N. KAWASHIMA and T. ITOH	509
Quasi-Steady Plasma Acceleration	R. G. JAHN, W. F. von JASKOWSKY and K. E. CLARK	523
Author Index		547