



## CONTENTS

Injection of Plasma into a Closed Trap with a Double Helical Magnetic Field . . . . .	1
G. M. Batanov, S. E. Grebenschchikov, M. A. Ivanovskii, I. S. Sbitnikova, O. I. Fedyanin, and I. S. Shpigel'	
A Toroidal Magnetic Trap of the Stellarator Type with External Plasma Injection . . .	13
M. S. Berezhetskii, S. E. Grebenschchikov, N. M. Zverev, and I. S. Shpigel'	
A Titanium Plasma Source. I. Construction and Main Parameters	21
S. N. Popov	
A Titanium Plasma Source. II. Mass Composition, Energy Spectrum, and Purification of Plasma	30
E. D. Andryukhina and I. S. Shpigel'	
Particle Motion and Plasma Equilibrium in a Stellarator Field	36
A. P. Popryadukhin	
Radiative Acceleration of Plasma	50
V. I. Veksler, I. R. Gekker, E. Ya. Gol'ts, B. P. Kononov, G. S. Luk'yanchkov, M. S. Rabinovich, K. A. Sarkyan, K. F. Sergeichev, V. A. Silin, and L. E. Tsopp	
Motion of a Plasmoid in Longitudinal, Transverse, and Two-Dimensional Multipole Magnetic Fields	68
G. A. Delone and M. M. Savchenko	
Ionization and Plasma Generation by Laser Radiation	76
G. A. Askar'yan and M. S. Rabinovich	
Emission from a Pinched Discharge in the Visible and Ultraviolet Regions. I. Fast Discharge at Low Current Densities	84
M. R. Bedilov, V. M. Likhachev, G. V. Mikhailov, and M. S. Rabinovich	
Emission from a Pinched Discharge in the Visible and Ultraviolet Regions. II. Fast Discharge at High Current Densities	92
V. M. Likhachev, G. V. Mikhailov, and M. S. Rabinovich	

Some Nonlinear Effects in Collisionless Plasma and Possible Applications	97
I. S. Danilkin, L. M. Kovrzhnykh, M. D. Raizer, and V. N. Tsytovich	
Statistical Acceleration of Particles in Plasma	114
V. N. Tsytovich	
Acceleration of Particles during Interaction of High-Frequency Fields with Plasma	147
I. S. Danilkin, M. D. Raizer, and V. N. Tsytovich	
Theory of Nonlinear Interaction of Waves in Plasma	155
L. M. Kovrzhnykh	
Acceleration of Electrons in Plasma Placed in a Strong Electric Field	184
E. E. Lovetskii and A. A. Rukhadze	
Theory of Hydrodynamic Stability of Inhomogeneous Plasma Beams	195
E. E. Lovetskii and A. A. Rukhadze	

