

CONTENTS

Chapter 1 – ACTIVE EXPERIMENTS IN SPACE PLASMA (Mtg D5)

Preface	3
Wave Results from OEDIPUS A <i>H. G. James</i>	5
High Power HF Modification: Geophysics, Span of EM Effects, and Energy Budget <i>H. C. Carlson, Jr</i>	15
Magnetospheric Plasma Thermal Perturbations Induced by Resonant Heating of the Ionospheric F-Region by High-Power Radio Wave <i>V. V. Vas'kov, Ya. S. Dimant and N. A. Ryabova</i>	25
The Diagnostics of Suprathermal Electron Spectrum by Barium Clouds Injection <i>V. N. Oraevsky, Yu. Ya. Ruzhin, V. V. Vas'kov and Ya. S. Dimant</i>	35
Modelling the Plasma Dynamics of the CRRES G-9 and G-10 Barium Releases <i>J. D. Huba, P. A. Bernhardt, J. A. Fedder, J. G. Lyon and H. G. Mitchell</i>	45
Finite Element Simulation (FES): A Computer Modeling Technique for Studies of Chemical Modification of the Ionosphere <i>M. Mendillo, J. Semeter and J. Noto</i>	55
One-Dimensional Particle Simulations of the Low-Frequency Features in the CRIT II Rocket Experiment <i>O. Bolin and N. Brenning</i>	65
Critical Ionization Velocity (CIV) Experiment XANI Onboard the Intercosmos 24 - "Active" Satellite <i>L. Bankov, M. Gousheva, A. Lefterov, G. Binev, A. Vassileva, Yu. Potanin and E. Dubinin</i>	69
A Feasibility Study on the Xenon and Carbon Dioxide Gas Release Experiments on the Argos Satellite <i>S. T. Lai, E. Murad, C. P. Pike, W. J. McNeil and A. Setayesh</i>	81
H.F. Emission Related to the Li ⁺ Ion Beam Injected into Ionosphere - "Plazma" Rocket Experiment <i>Z. Klos, Z. Zbyszynski, U. F. Agafonov, G. G. Managadze and A. D. Mayorov</i>	91
<i>In-Situ</i> Observations of VLF Waves Generated by a Modulated Electron Beam in the Ionosphere <i>J. Ernstmeier, N. B. Myers and W. J. Raitt</i>	95

Ground-Based VLF Measurements During Pulsed Electron Beam Emissions in the Ionosphere	99
<i>N. B. Myers, J. Ernstmeier, P. McGill, A. C. Fraser-Smith, W. J. Raitt and D. C. Thompson</i>	
Active Plasma Experiment - Project APEX	103
<i>V. N. Oraevsky and P. Tríska</i>	
A Behaviour of Electron and Ion Energy and Angular Distribution During the Active APEX Experiment	113
<i>Z. Nemecek, J. Safrankova and L. Prech</i>	
The Active Experiments in the Stratosphere with the Electron Beams Injection	117
<i>Yu. Ya. Ruzhin, V. N. Oraevsky and V. A. Tutyck</i>	
On the Hall Effect on Alfvén Waves in Non-Uniform Magnetic Fields and Inhomogeneous Plasmas	123
<i>L. M. B. C. Campos and N. L. Isaeva</i>	
Chapter 2 – PLASMA–SATELLITE–DUST INTERACTIONS (Mtg D7)	
Preface	135
In Memory of Chris Goertz	137
<i>G. Morfill</i>	
Dust in the Planetary System	139
<i>E. Grün</i>	
Collective Effects on the Structure and Dynamics of Systems with Charged Dust	153
<i>O. Havnes</i>	
Electrostatic Charging of Ring Dust Clouds	165
<i>G. R. Wilson</i>	
Electrostatic Interactions of Two Dielectric Dust Particles in the Presence of Plasma	175
<i>J. W. Manweiler, T. E. Cravens and T. P. Armstrong</i>	
A Modified Particle–Particle Approach to the Charging of Grain Lattices Within a Dusty Plasma	179
<i>T. W. Hyde and W. M. Richter</i>	
Secondary-Electron Yields of Solar System Ices	183
<i>D. M. Suszcynsky, J. E. Borovsky and C. K. Goertz</i>	

Ion Irradiation Experiments	189
<i>G. Strazzulla, G. Leto and M. E. Palumbo</i>	
Electric Charging and Electrostatic Fragmentation of Dust Particles in Laboratory	199
<i>J. Svestka, I. Cermak and E. Grün</i>	
Electric Potential and Charge on Large and Small Bodies in Collisionless Plasmas: Physical Processes and Effects	203
<i>J.-P. J. Lafon</i>	
Energetic Particle Absorption by Atmosphereless Satellites and Rings	209
<i>L. L. Hood</i>	
Micro- and Macro- Signatures of Energetic Charged Particles in Planetary Magnetospheres	221
<i>R. S. Selesnick</i>	
Dust in Planetary Magnetospheres	231
<i>M. Horanyi</i>	
Lorentz and Gravitational Resonances on Circumplanetary Particles	241
<i>D. P. Hamilton and J. A. Burns</i>	
Solar Wind Interaction with Asteroids	249
<i>F. Herbert</i>	
The Potential of the Dust Grains of Comet Halley	259
<i>P. Lamy, J.-P. J. Lafon and C. Dumas</i>	
Detachment and Instability of Cometotail	267
<i>H. O. Upadhyay and R. P. Singh</i>	
The Phobos and Deimos Effects	271
<i>E. M. Dubinin</i>	
Bi-Ion Fluid Description of Plasma Dust Interaction: Relevance to Phobos Events	291
<i>K. Baumgärtel and K. Sauer</i>	
The Electromagnetic Effects of the Solar Wind Interaction with Phobos	295
<i>M. K. Dougherty, A. M. Krymskii, T. K. Breus, D. J. Southwood and W. I. Axford</i>	
Stationary MHD Waves Modified by Hall Current Coupling	299
<i>T. I. Woodward and J. F. McKenzie</i>	
Wave Propagation in Cold Multi-Fluid Plasmas	305
<i>M. K. Dougherty and D. J. Southwood</i>	