

TABLE OF CONTENTS

Simulation of Current Free Double Layers in Highly Electronegative Plasma Using Monte Carlo Collision in OOPIC Pro and XOOPIC	1
<i>Corey Allen Henderson, Noah Hershkowitz</i>	
An Implicit Maxwell Solver	2
<i>Andrew J. Christlieb</i>	
Investigation of Low Pressure Capacitively Coupled Plasma Behavior Using PIC-MCC Simulation	3
<i>Kallol Bera</i>	
Kinetic Self-Consistent Simulations of Electromagnetic Effects in CCP Plasmas with a 2D Darwin PIC/MCC Code	4
<i>Denis Eremin</i>	
Single-Electron Based Model of the Child-Langmuir Law	5
<i>Yingbin Zhu, Lay Kee Ang</i>	
High Order PIC Simulation of High Power Millimeter Wave Sources	6
<i>Jonathan Neudorfer</i>	
Simulation of Self-Neutralization Techniques for Charged Particle Thrusters	7
<i>David C. Liaw</i>	
Multiple-Beam Amplifiers	8
<i>Khanh Nguyen</i>	
Development of a 10-kW W-Band Sheet Beam Extended Interaction Klystron (EIK)	9
<i>John A. Pasour</i>	
Three-Dimensional, Time-Dependent Simulation of Inductive Output Tubes	10
<i>Henry Freund</i>	
350 MHz, 200 kW CW, Multiple Beam Inductive Output Tube	11
<i>Robert L. Ives</i>	
Development of a 1.5 MW Conventional Magnetron via Numerical Simulation	12
<i>Michael Lambrecht</i>	
Possible Effect of Metallic Dust on Operation of Rep-Rate, High-Power Microwave Devices	13
<i>Gregory S. Nusinovich, Dmytro G. Kashyn</i>	
The Concepts of in-Phase Multichannel Ka-band HPM Oscillators	14
<i>Michael I Yalandin</i>	
High-Energy Bremsstrahlung Diagnostics to Characterise Hot Electron Production in Short-Pulse Laser-Plasma Experiments	15
<i>Anthony L Meadowcroft, Ray D. Edwards</i>	
Ionization Energy Shift in Iridium Measured with a Lutetium Edge Filter	16
<i>Nino R. Pereira</i>	
X-Ray Diagnostics in a Mega-Amp Dense Plasma Focus Device - Focus Fusion-1	17
<i>S. Krupakar Murali</i>	
Time Resolved Visible Spectroscopy Characterizations of Single Wire Aluminum Plasmas	18
<i>Kate S. Blesener</i>	
Same-Shot X-Ray Thomson Scattering and Streaked Imaging of Radiative Shock Experiments at Omega	19
<i>Channing M Huntington</i>	
Characterization of the Pulse-Burst Laser System for High-Repetition-Rate Thomson Scattering	20
<i>Wayne S. Harris</i>	
Experimental Measurements of the Dynamic Electric Field Topology Associated with Magnetized RF Sheaths	21
<i>Elijah H. Martin</i>	
Focusing of Laser-Accelerated Protons for Fast Ignition Studies	22
<i>Claudio Bellei</i>	
Basic Study of a Diagnostic Electron Beam Traversing a Plasma and Electromagnetic Wave	23
<i>Ronald L. Williams, Arnesto L. Bowman</i>	
The Effect of Fast Electron Scattering on Determining the Laser-Induced Electron Divergence	24
<i>Sheng Jiang</i>	
Study of EMHD Waves in a Magnetic Bubble	25
<i>V. P. Anitha</i>	
The Role of Laser Wavelength on Dual Pulse Laser-Breakdown Spectroscopy	26
<i>Ryan W. Coons</i>	

How the Plasma Bullet Stops Propagating	27
<i>Mounir Laroussi</i>	
ITER ECH Transmission System Test Stand and Prototype Component Development	28
<i>Tim S. Bigelow</i>	
FRC Lifetime Studies for the Field Reversed Configuration Heating Experiment	29
<i>Theodore C Grabowski</i>	
Theta-Pinch Preionization and Trapped Flux in FRC Formation	30
<i>Michael H. Frese, Sherry D. Frese</i>	
High Power Excilamps	31
<i>Victor F. Tarasenko</i>	
Diagnostic Study of Micro-Discharges of Inert Gas under Atmospheric Pressure	32
<i>Chih Chun Wang</i>	
Flexible and Transparent Microplasma Devices for Ultraviolet Medical Treatment	33
<i>T. G. Oh</i>	
Ashing Process Using an Atmospheric Pressure, DBD-Generated Plasma	34
<i>Seungryul Yoo</i>	
Hop Structure Optimization	35
<i>Marcus I. Pearlman</i>	
Space Charge Limited Current in a Gap Combined of Several Kinds of Medium	36
<i>Yingbin Zhu, L. K. Ang</i>	
Field Emission Properties of Nano-Layered Carbon Lateral Edge Emitters	37
<i>Nalin Kumar</i>	
Study on Electrical Characteristics of HfO₂ Treated by NF₃ Plasma	38
<i>Jung-Chan Lee</i>	
Optical Characterization of Atmospheric Torch Operating Modes	39
<i>Anthony J. McWilliams</i>	
Charging of Dust Grain Clusters in Flowing Plasmas	40
<i>Gennady Miloshevsky, Ahmed Hassanein</i>	
Non-Gaussian Velocity Distribution of Microparticles in Plasma under Microgravity Conditions	41
<i>Amit Mukhopadhyay</i>	
Defect Dynamics and Plastic Deformations in Complex Plasmas	42
<i>Celine Durniak, Dmitry Samsonov</i>	
Modeling of Dust Transport and Impact on Fusion Edge Plasmas	43
<i>Roman Smirnov</i>	
Investigation of Beam Parameters to Design Plasma Filled BWO	44
<i>Niraj Kumar</i>	
Rapid Formation of Distributed Plasma Discharges Using X-Band Microwaves	45
<i>David Holmquist</i>	
Conservation of Energy Analysis of Collisional Cross-Field Diffusion	46
<i>Brooke S. Stutzman, John P. Verboncoeur</i>	
Experimental Investigation of Air Breakdown Utilizing a 1.5-MW, 110 GHz Gyrotron	47
<i>Jason S. Hummelt</i>	
Design of an ECH System for a Small Modular Stellarator	48
<i>Humberto J. Trimino</i>	
Modeling of a Tokamak Antenna Module with VORPAL	49
<i>Christine M. Roark</i>	
Validation and Uncertainty Quantification of ICEPIC/EMPHASIS Codes for a Series of Gas Cell Experiments at NRL	50
<i>Keith L. Cartwright</i>	
An Improved Self-Consistent Fitting Model for Characterizing Field Emitters	51
<i>M. C. Lin</i>	
An Investigation into Radial Gradients in an Electrothermal Plasma Source Using a Semi 2-D Approach	52
<i>A. Leigh Winfrey</i>	
One Dimensional Modeling of Atomic and Molecular Species in DC and RF Ion Sources	53
<i>Elizabeth Surrey, Andrew Jt Holmes</i>	
Numerical Study of the Start-up Scenario of a 670 GHz Gyrotron Operation at TE_{31,8} Mode	54
<i>Ruifeng Pu</i>	
Characterization of a Helicon Ion Source for Helium-3 Fusion in an Inertial Electrostatic Confinement Device	55
<i>Gabriel E Becerra</i>	

Simulation of Microwave Plasma Discharge in 915 MHz CVD Reactor for Single Crystal Diamond Deposition	56
<i>Joseph Lai</i>	
Two Dimensional Child-Langmuir Law for a Sharp Field Emitter	57
<i>Song Sun, Lay Kee Ang</i>	
The Monte Carlo Simulation of a 1MW Neutral Beam Injector on RFX-mod	58
<i>Nicola Pisan</i>	
Contribution of the Photonetic Doppler Velocimetry to the Cesar Electron Beam Analyze	59
<i>Luc Voisin</i>	
Using a Relativistic Electron Beam to Generate Warm Dense Matter for Equation of State Studies	60
<i>Michael J. Berninger</i>	
Application of the NRL High-Impedance Radiography Diode to a 2.3-MV Generator	61
<i>Raymond J. Allen</i>	
Characterization of Heavy-Ice Deposition-Thickness on Flat Metal Targets for Deuteron Ion Acceleration	62
<i>Matthew S. Engle</i>	
Design, Construction and First Tests of a Stainless Steel Load for High Power mm-Wave Radiation	63
<i>Stefan Illy</i>	
Numerical Studies on the Parasitic Modes in Gyrotron Beam Tunnels	64
<i>George P. Latsas</i>	
Parametric Study on the Ohmic Loading of the 170-GHz 2-MW EU Coaxial Gyrotron Cavity	65
<i>Zisis C. Ioannidis</i>	
Effects of Long-Line Reflection on the Instantaneous Tunability of Gyrotron Backward-Wave Oscillators	66
<i>Shih-Hung Chen</i>	
Excitation of Backward Waves in Beam Tunnels with Saw-Teeth Wall Profiles in Gyrotrons	67
<i>Dmytro Kashyn</i>	
Free Electron Maser Amplifier Experiments	68
<i>Colin G. Whyte</i>	
Regimes for Efficiency Enhancement of Fast-Wave Amplifiers	69
<i>K. Matheson</i>	
Investigation of a Laboratory Plasma for a Geophysical Simulation Experiment	70
<i>Sandra L. McConville</i>	
Numerical and Laboratory Investigation of Astrophysical Cyclotron Emission Processes	71
<i>David C. Speirs</i>	
Growth Mechanism of ZnO Thin Films Deposited by an Atmospheric Pressure Plasma Jet	72
<i>Hsin Chieh Li</i>	
Modeling of Convective Plasma Flow in High Pressure Microwave Plasma-Assisted CVD Diamond Reactors	73
<i>Collin S. Meierbachtol</i>	
Atmospheric Pressure Microwave-Powered Microplasma Source	74
<i>Peiyao Liu</i>	
Spectroscopic Investigation of Multiple Boltzmann Distributions of Argon Atomic and Ionic Excited States in an Expanding H₂O-Ar DC Arc Jet	75
<i>Viktor Sember</i>	
Microwave Plasma Assisted Reactor Design for High Deposition Rate Diamond Synthesis	76
<i>Yajun Gu</i>	
Characteristics of Pulsed Discharge Plasmas at Atmospheric Pressure for Preparation of Large-Area Amorphous Carbon Films	77
<i>Yusuke Kikuchi</i>	
Plasma Based Nano-Technology Laboratory	78
<i>Charles A. Gentile, Yevgeny Raitses</i>	
Towards Recombination Pumped H-like N X-Ray Laser	79
<i>Itay Gissis</i>	
The LLNL Z-Pinch Ion Probe Experiment (ZIPX)	80
<i>Vincent Tang</i>	
Anisotropy and Feedthrough in Magneto-Rayleigh-Taylor Instabilities	81
<i>Y. Y. Lau</i>	
Seeded Magneto-Rayleigh Taylor Experiments on Planar Foils Using a 1-MA Linear Transformer Driver	82
<i>David A. Chalenski</i>	

Spectroscopic Analysis of Foil Plasmas on a 1-MA Linear Transformer Driver	83
<i>Sonal G. Patel</i>	
Multidimensional Radiation MHD Modeling of Argon on Deuterium Gas Puff Z-Pinch Loads as a Neutron Source	84
<i>Young K. Chong</i>	
Nuclear Reaction Kinetics in Deuterium Gas Puffs	85
<i>Brian D. Appelbe, Jeremy Chittenden</i>	
Comparison of Implosion Characteristics of Gases in a 1.5 kJ Plasma Focus	86
<i>Brian L. Bures</i>	
MHD Simulation of Low Current Pinch Plasma Dynamics	87
<i>Syed M. Hassan</i>	
NX-3 Plasma Focus Device: High Flux Pulsed Neutron Source	88
<i>Rishi Verma</i>	
Neutron Yield, Implosion Time and Energy Efficiency from a Low Energy, High Repetition Rate Plasma Focus at the 100 kA Level	89
<i>Brian L. Bures</i>	
Capillary Discharge as a Table-Top Soft X-Ray Source	90
<i>Maria Pia Valdivia</i>	
Influence of Volume Dielectric Barrier Discharge in Argon and Argon Oxygen Atmospheres on Water and E. coli Suspensions	91
<i>Katrin Oehmigen</i>	
Plasma-Cell-Interaction: Expression of Surface Molecules on HaCaT Keratinocytes after Treatment with Dielectric Barrier Discharge (DBD) Plasma	92
<i>Beate Haertel</i>	
Global Characterization of Physical Plasma Impact on Vegetative Microorganisms	93
<i>Jorn Winter</i>	
Influence of Non-Thermal Atmospheric Pressure Plasma on DNA of Human Keratinocytes (HaCaT): Role of Reactive Oxygen Species	94
<i>Susanne Blackert</i>	
Chemical Species Generated in Water by an Atmospheric-Pressure Air Plasma Jet	95
<i>Xiaolong L. Hao</i>	
Focused Laser Initiated RF Sustained High Pressure Air Plasmas	96
<i>Ryan C. Giar, John E. Scharer</i>	
Thomson Scattering from a Laser Induced Breakdown in 1 Atmosphere of Helium	97
<i>Elena Nedanovska</i>	
Photoionization in Precursor of Laser-Induced Plasma by Ultraviolet Radiation	98
<i>Kohei Shimamura</i>	
Numerical Simulation of Laser-Produced Plumes	99
<i>Atsushi Sunahara</i>	
Plasma Evolution Induced by Long Nanosecond Laser Pulse Ablation: Time-Resolved Measurement and Physics-Based Modeling	100
<i>Sha Tao</i>	
Study of Short-Pulsed Laser-Induced Plasma Confined in a Microhole	101
<i>Sha Tao, Benxin Wu</i>	
Underwater Laser Filamentation and Guiding of Electrical Discharges	102
<i>Michael H. Helle</i>	
Investigation of Plasma Flow Redirection by an Externally Applied Magnetic Field	103
<i>Christopher Plechaty</i>	
Numerical and Experimental Analysis of THz Sheet Beam Traveling Wave Tube Amplifier (TWTA)	104
<i>Anisullah Baig</i>	
Development of a 670 GHz Extended Interaction Klystron Amplifier	105
<i>David Chernin</i>	
670 GHz Power Amplifier Development at Northrop Grumman	106
<i>Jack C. Tucek</i>	
Measurement of Surface Roughness Effects on Conductivity in the Terahertz Regime with a High-Q Quasioptical Resonator	107
<i>Benjamin B. Yang, John H. Booske</i>	
Plasma Creation by a Powerful Electromagnetic Radiation of Terahertz Gyrotrons	108
<i>Vladimir L. Bratman</i>	
220 GHz Power Amplifier Development at Northrop Grumman	109
<i>Mark A. Basten</i>	

Examination of Electromagnetic Attenuation Induced by Atmospheric Water Content on Terahertz Radiation	110
<i>Marcus J. Weber</i>	
Thermodynamics of Microplasma Initiation in Liquids	111
<i>Robert Geiger</i>	
Plasma Acid and its Applications	112
<i>Natalie Shainsky</i>	
Study of Generation Mechanism of OH Radical in an Atmospheric Pressure Argon Microwave Plasma Jet with Addition of Water Content	113
<i>Nimisha Srivastava, Chuji Wang</i>	
Independently Controlled Rf Micro-Dielectric Barrier Discharge Arrays	114
<i>Jun-Chieh Wang</i>	
High Speed Monitoring of the Discharge Regimes of a Non-Thermal Atmospheric Pressure Plasma Jet	115
<i>Sebastian Peters</i>	
Propagation of Ion Plasma Wave-Packet as the Plasma Bullet in a Plasma Jet-Plume	116
<i>Guangsup Cho</i>	
Analysis of Implosion and Stagnation of Stainless Steel Wire Array Z-Pinches at 18MA on the Z Generator	117
<i>D. J. Ampleford</i>	
2D Radiation MHD Model Assessment of Initial Argon Gas Distributions to be Imploded on the Z Machine*	118
<i>J. W. Thornhill</i>	
Anisotropy and Pulse Shaping of Radiation Emitted from Multi-Planar Wire Arrays	119
<i>V. L. Kantsyrev</i>	
3-Dimensional Modeling of Nested Al and Ni-clad Ti on Al Wire Array Z Pinches	120
<i>Christopher A. Jennings</i>	
Cold K-Shell Emission from the Implosion of Brass Planar Wire Arrays and X-Pinches Performed at the 1-MA Zebra Generator at UNR	121
<i>Nicholas D. Quart</i>	
Spectroscopic Modeling for HEDP Experiments	122
<i>I. E. Golovkin</i>	
Analysis of Radiation from Uniform and Combined Ag Planar Wire Arrays	123
<i>Michael E. Weller</i>	
A Comparison of Emissive Probe Techniques for Electric Potential Measurements in a Complex Plasma	124
<i>J. P. Sheehan</i>	
Effects of Wire Thickness, Neutral Pressure and Gas Composition on the Inflection Point Technique	125
<i>Noah Hershkowitz</i>	
The Plasma-Sheath-Transition in RF-Modulated Low Temperature Plasmas: On the Existence of a Modified Bohm Criterion	126
<i>Ralf Peter Brinkmann</i>	
Dynamics of Atmospheric Pressure He/H₂O Microplasmas: a New Double Layer Structure	127
<i>Kirsty McKay</i>	
Ion Beam Observation in the Madhex Helicon Source	128
<i>Matthew D. Wiebold</i>	
Excitation of Large-Scale Plasma Sheets and Micropulsations by Injected High Power Radio Waves	129
<i>Rezy Pradipta</i>	
Characterization of Plasmas in Saline Solutions under Different Bubble Behavior	130
<i>Hung Wen Chang, Cheng Che Hsu</i>	
Microwave Plasma Assisted Synthesis of Single Crystal Diamond at High Pressures and High Power Densities	131
<i>Jing Lu</i>	
High-Functionally Composite Materials by Gas Tunnel Type Plasma Spraying	132
<i>Akira Kobayashi</i>	
Measuring Fill Gas Pressure in an Electrodeless Lamp by RF Impedance Diagnostics	133
<i>Richard P Gilliard</i>	
Glow-to-Arc Transition in Mercury-Free HID Lamps: Cathode Phenomena and Salt Evaporation Model	134
<i>Natalia Yu. Babaeva</i>	
Investigation of Plasma Detachment Mechanisms in a Magnetic Nozzle	135
<i>Paul-Quentin Elias, Renaud Gueroult</i>	

Two-Dimensional Laser Collision-Induced Fluorescence Mapping of Electron Density and Temperature near Plasma Cathode Apertures	136
<i>Brandon R. Weatherford</i>	
Nuclear Diagnostic Commissioning for the National Ignition Campaign	137
<i>Sebastien Le Pape</i>	
Performance Characteristics of the Neutron Imaging Diagnostic at NIF	138
<i>Frank E. Merrill</i>	
Measuring Neutron Yield and γ Anisotropies with Activation Foils at the National Ignition Facility	139
<i>Darren Bleuel</i>	
The Radiochemical Analysis of Gaseous Samples (RAGS) Apparatus for Nuclear Diagnostics at the National Ignition Facility	140
<i>Dawn A. Shaughnessy</i>	
Introducing Hairpin Probe for Electron Density Measurement in a Kamaboko-III Negative Ion Source	141
<i>Gurusharan Singh Gogna</i>	
Increased Resolution ECE Imaging of Temperature Profiles/Fluctuations in Tokamak Plasmas	142
<i>Xiangyu Kong</i>	
Measurement of Ablative Richtmyer-Meshkov Growth in Planar Geometry	143
<i>Steven H. Batha</i>	
Investigation of Electrical Conductivity and Equations of State of Metals Using Different Timescale Underwater Electrical Wire Explosion	144
<i>Daniel Sheftman, Yakov E. Krasik</i>	
Velocity and Temperature Measurements of Z Pinch Plasmas Using Optical Thomson Scattering	145
<i>Adam J. Harvey-Thompson</i>	
Plasma Dynamics and Stability of Radial Foil Explosions on COBRA	146
<i>Pierre A. Gourdain</i>	
Asymmetric Spreading of a Radial Foil Plasma Jet Due to Imposed Magnetic Field	147
<i>Peter Schrafel</i>	
Equations of State for Metals at High Energy Densities	148
<i>Konstantin V. Khishchenko</i>	
PIC/MCC Simulations and Measurements of Microdischarges in MEMS Structures	149
<i>Ayyaswamy Venkatraman</i>	
Chemistry of Atmospheric Pressure Low Temperature Plasma Jets for Different Experimental Parameters	150
<i>Erdinc Karakas</i>	
Ion Acceleration in the Madhex Helicon Source	151
<i>Yung-Ta Sung</i>	
Ambipolar Diffusion in Weakly Ionized Plasmas	152
<i>Jaime H. Hoyos</i>	
Control of the Contact Hole Diameter Using Inductively Coupled Fluorocarobon and Hydrocarbon Plasmas	153
<i>Jun-Hyun Kim</i>	
Investigation of the Moving Striation in a Low Pressure Mercury Discharge	154
<i>Yoshio Watanabe, Masato Kawagoe</i>	
Radar Cross Section Simulation of Metal Cone Covered with Plasma	155
<i>Shen Shou Max Chung</i>	
Particle-in-Cell Simulation of Plasmonic Nanoparticle	156
<i>Wee Shing Koh</i>	
Heat Transfer in Beam Optics Analyzer	157
<i>Thuc Bui</i>	
Integrated Thermal & EM Simulation Capability in the VORPAL Software	158
<i>David Smithe</i>	
Particle-in-Cell (PIC) Tools for Simulation of Electrodynamic Bare Tether Plasma Interactions	159
<i>Sudhakar Mahalingam</i>	
Optimization and Characterization of Xenon Ions Density in a Hall Plasma Thruster	160
<i>Danjuma Ibrahim Ndiingidah</i>	
Two-Stream Instability in Plasma Klystron	161
<i>Peter Mardahl</i>	
Ion Source Characterization and Testing	162
<i>Emily Ann Baxter</i>	

Electron Gun Design for High Voltage Piezoelectric Accelerators	163
<i>Brady B. Gall</i>	
Cylindrical Atmospheric Plasma Source Using Parallel MHCD and Repetitive Impulse Voltage to the Third Axial Electrode	164
<i>Mitsuaki Maeyama</i>	
Integrated Cylindrical Plasma Source Using Parallel Operated MCS Discharges	165
<i>Taichi Asano</i>	
Atmospheric Pressure Microwave Plasma Torch	166
<i>Ferhat Bozduman</i>	
Ion Emission Dynamics in Ultrafast Laser Ablated Plasmas	167
<i>Brandon Verhoff</i>	
Plasma Diagnostics with a High-Aspect Ratio Cylindrical Probe Used as an Impedance Probe	168
<i>David N. Walker</i>	
Ambient Ionization for Methane Quantification in Simulated Martian Atmosphere Using Miniature Inductively Coupled Plasmas	169
<i>Mazdak Taghioskoui</i>	
Tongue-Shaped Ultrahigh Frequency Atmospheric Pressure Plasma Jet	170
<i>Mazdak Taghioskoui</i>	
Electrical Modeling of Strongly-Coupled Microstrip Resonator Arrays for Microplasma Generation	171
<i>Alan R. Hoskinson</i>	
Simulation of a Capacitively Coupled Silane/hydrogen Discharge	172
<i>Fu-Wei Gu</i>	
Minimizing Damage of Porous SiCOH Using He/H₂ Plasmas	173
<i>Juline Shoeb, Mark J. Kushner</i>	
Optical Diagnostics on Transient Plasma Ignition	174
<i>Scott J. Pendleton, Martin A. Gundersen</i>	
Spatially Resolved Simulation of an Radio-Frequency Driven Atmospheric Pressure Plasma Jet in Ambient Air	175
<i>Torben Hemke</i>	
Intense Plasma Emissions by Plasma Direct Jet-to-Jet Coupling in Atmospheric Pressure Plasma Jet Arrays	176
<i>Jae Young Kim, Sung-O Kim</i>	
Observation of Plasma Bullet with a Charge-Coupled Device Camera and a Photo-Sensor Amplifier	177
<i>Yunjung Kim</i>	
Discharge Mechanism of Aqua-Plasma Inside an Oscillating Bubble in Electrolyte	178
<i>Sung-Young Yoon</i>	
Performance of 5 x 5 Arrays of Al/Al₂O₃ Microcavity Plasma Jet Devices: Spatially Resolved Optical Emission Profiles in He Flow	179
<i>J. H. Cho</i>	
Effect of Twist Wavelength on X-Ray Power Output in Al Cable Array Z-Pinches	180
<i>Cad L. Hoyt</i>	
Nested Array Dynamics from Ni-clad Ti - Al Wire Array Z Pinches	181
<i>C. A. Coverdale</i>	
Comparison of Multi-Dimensional MHD Simulations Against Exact Solutions for a Stagnating Z Pinch	182
<i>John L. Giuliani</i>	
New Exact MHD Solutions Describing the Stagnating Z-Pinch Plasma	183
<i>A. L. Velikovich</i>	
Wire Array Z-Pinch Experiments on MAGPIE Facility	184
<i>Sergey Lebedev</i>	
Analytical Analysis of the Ablation Phase of Low Wire Number Wire Arrays	185
<i>Simon C. Bott</i>	
Plasma Evolution and Modulated Structures along the Wire Within Aluminum Z-Pinch/X-Pinch Loads on QG-I Facility	186
<i>Gang Wu</i>	
Study of Plasma Diffusion Across Magnetic Fields Using Double Planar Wire Arrays	187
<i>Derek A. Mariscal</i>	
Preliminary Opacity Experiments in Dense High Z Plasmas on the MAGPIE Facility	188
<i>Louisa A. Pickworth</i>	
Optical and Electrical Diagnostic of Underwater Zn-wire Explosion	189
<i>Vaclav Prukner</i>	

Intense Ultrashort Laser - Xe Cluster Interaction	190
<i>Jack Davis</i>	
HEIGHTS Simulation and Optimization of Laser Produced Plasma EUV Sources	191
<i>Tatyana Sizyuk, Ahmed Hassanein</i>	
Laser-Produced Carbon Plasma Evolution and Lifecycle	192
<i>Mathew Polek</i>	
X-Ray Emission in the Water-Window from Laser-Produced Boron-Nitride Plasma	193
<i>Matthew L. Crank</i>	
Crater Formation and Signal Intensity in Nano- and Femto-Second Laser Ablation Inductively Coupled Plasma Mass Spectrometry	194
<i>Nicole L. Lahaye</i>	
Effects of Pre-Pulses on Extreme Ultraviolet Conversion Efficiency in Laser-Produced Tin Plasmas	195
<i>Justin R. Freeman</i>	
Time-of-Flight Spectroscopy and Fast Imaging Studies of Carbon Dimers in Laser-Produced Plasmas	196
<i>Khaled F. Al-Shboul</i>	
The Role of Excitation Wavelength on Debris for CO₂ and Nd:YAG Laser-Produced Plasma EUVL Sources	197
<i>Matthew D. Fields</i>	
Late Time Magnetic Field in Laser Produced Plasmas	198
<i>Sandra Stein</i>	
Experimental Study of Shock Wave Discontinuities and Interactions with Laser Induced Plasmas	199
<i>Magesh Thiyagarajan</i>	
Portable Plasma Torch Treatment on E. Coli, S. Aureus, N. Meningitidis and Other Clinical Isolates and Other Clinical Isolates	200
<i>Magesh Thiyagarajan, Lillian Waldbeser</i>	
Synthesis of Nanoparticles Using an Atmospheric Pressure Plasma Jet	201
<i>Shih Min Chang, Cheng Che Hsu</i>	
Decomposition of Cellulose by Plasma in Salt Solutions	202
<i>Shiue Hua Wang</i>	
Decomposition of Perfluorooctane Sulfonate in Water Using Atmospheric Plasma	203
<i>Hayato Obo</i>	
Sterilization of Organic Sheet by Plasma-Based Ion Implantation	204
<i>Noriyuki Sakudo</i>	
Atmospheric Pressure Plasma Decomposition of Azo Dyes in Water	205
<i>Szetsen Lee</i>	
Optical Emission Spectroscopy Analysis of Silane/Methane/Hydrogen Plasma for Deposition of a SiC:H Film	206
<i>Ching-Po Lin</i>	
Dielectric Barrier Atmospheric Discharge Combined with Petri-Dish	207
<i>Junggil Kim</i>	
Sterilization Effect of Various Gas Non-Thermal Plasma	208
<i>Toshihiro Takamatsu</i>	
Atmospheric Pressure Air Plasma Jet Assisted Blood Coagulation	209
<i>Yong Hee Kim</i>	
Atmospheric Pressure Plasma Jet Effects on Sterilization of E. coli and S. aureus	210
<i>Taner Aktan</i>	
Antibacterial Efficacy of Nonthermal Atmospheric Pressure Plasma Against Candida albicans	211
<i>Taner Aktan</i>	
A Self-Pulsed Air Plasma Plume for Biomedical Applications	212
<i>Xinpei Lu</i>	
Tooth Whitening by a Direct Current Cold Plasma Micro-Jet	213
<i>Xiaohui Yang</i>	
Nanosecond Pulsed Electric Fields Combined with Gemcitabine as a Potential Breast Cancer Therapy	214
<i>Shan Wu</i>	
A High-Energy Resolution X-Ray Spectrometer with Interchangeable Detectors (HEX-ID) for Short-Pulse Laser-Plasma Experiments	215
<i>David F. Martin, Anthony L. Meadowcroft</i>	
Spectral Characterization of Al and Ar K-Shell Z-Pinch Source on Sphinx	216
<i>Thierry D' Almeida</i>	
Determination of the Rocking Curve and Reflection Efficiency of a SiO₂ Crystal Imager using Zr, Nb, Mo and Ag Ka X-Rays	217
<i>Perrin E. Schiebel</i>	

Development of a Microchannel Plate Based Gated X-Ray Imager for Imaging and Spectroscopy Experiments on Z.....	218
<i>Ming Wu</i>	
Multi-Color Gated X-Ray Pinhole Imaging of Z-Pinch Implosions on the Saturn and Z Pulsed Power Generators.....	219
<i>B. Jones</i>	
Improved Visualization of Z-Pinch Dynamics from Inversion of Streak Camera Data into Video Format.....	220
<i>Adam D. Cahill</i>	
Streamer Dynamics in Transformer Oil: Influence of Applied Voltage Rise Time.....	221
<i>Jouya Jadidian</i>	
Optical and Electrical Diagnostics of 100 Micron Diameter Wires Exploded in Air.....	222
<i>Jane M. Lehr</i>	
Pulsed HV Vacuum Breakdown of Aluminium and Velvet Cathodes.....	223
<i>Bertrand Etchessahar, Remi Nicolas</i>	
Breakdown Electron Temperature in Spark Gap Switch by High Voltage Pulses.....	224
<i>Yong Seong Byeon</i>	
Device Development and Pulse Performance of Super-12 Si SGTO.....	225
<i>Aderinto Ogunniyi</i>	
Diffusive Radial Expansion Effect on Long-Rail Spark Dynamical Impedances.....	226
<i>Lawrence S. N. Wang</i>	
Three-Dimensional MHD Simulations of a Plasma Switch Opening.....	227
<i>Michael H. Frese, Volodymyr Makhin</i>	
Performance of NIF Ignition Type Implosions.....	228
<i>Joseph D. Kilkenny</i>	
Neutron Time-of-Flight Measurements on the National Ignition Facility.....	229
<i>James P. Knauer</i>	
Uncertainty Analysis for Ablator Areal Density Measurements Using Gamma-Ray Emission of Imploded Capsules at the OMEGA Laser.....	230
<i>Nelson M. Hoffman</i>	
Initiation of Quasi Spherical Direct Drive Capsules for Inertial Fusion.....	231
<i>John P. Vandevender</i>	
Imploding Plasma Liners as a Standoff Driver for Magneto-Inertial Fusion.....	232
<i>Scott C. Hsu</i>	
Advanced Fusion Reactors for Space Propulsion and Power Systems.....	233
<i>John J. Chapman</i>	
Modeling of Drive Induced Oscillation in a Coupled Cavity TWT.....	234
<i>Alexander N. Vlasov</i>	
Modeling of the Wide-Band Coupled-Cavity TWTs with the Large-Signal Code TESLA-CC.....	235
<i>Igor A. Chernyavskiy</i>	
Effects of Non-Periodic Variations in Periodic RF Structures.....	236
<i>Vadim Jabotinski</i>	
Status of the Michelle Code and Applications to RF Guns.....	237
<i>John Petillo</i>	
GPU-Accelerated 3D Electromagnetic PIC Simulations.....	238
<i>Simon J. Cooke</i>	
Study on Low-Frequency Oscillations in a Gyrotron Using a 3D CFDTD PIC Method.....	239
<i>M. C. Lin, D. N. Smithe</i>	
Temporal Particle-in-Cell in Beam Optics Analyzer.....	240
<i>Thuc Bui</i>	
Single-File Diffusion in a Dusty Plasma.....	241
<i>Terrence E. Sheridan</i>	
Wave Phenomena in Complex Plasmas.....	242
<i>Dmitry Samsonov</i>	
Viscosity Quantified in 2D Dusty Plasma Experiment.....	243
<i>Yan Feng</i>	
Observation of Cusp Structures in Dusty Plasma Simulations.....	244
<i>Sanat Kumar Tiwari</i>	
Theoretical Studies for the CARE II Rocket Experiment to Excite Plasma Waves in the Ionosphere by High Speed Dust Injection.....	245
<i>Paul A. Bernhardt, Marlene Rosenberg</i>	

Permeability Characteristics of Hollow Nanoparticles Fabricated by Low-Pressure Plasma Deposition	246
<i>Anaram Shahravan, Themis Matsoukas</i>	
Aerosol/Cluster Formation and Hydrogen Co-Deposition by Colliding Ablation Plasma Plumes of Lithium and Lead	247
<i>Yoshi Hirooka</i>	
Effects of Plasma Exposure on Defects in Novel Dielectric Materials	248
<i>He Ren</i>	
Screening and Electric Double Layer in Strongly Coupled Plasmas	249
<i>Igor V. Morozov, Genri E. Norman</i>	
Time-Resolved Study and Comparison of Plasmas in High Power Pulsed and Modulated Pulse Power Magnetron Sputtering	250
<i>Liang Meng</i>	
Separation of Ion and Photon Damage Effects on Novel Dielectric Materials During Plasma Exposure	251
<i>He Ren</i>	
Hanging Ten to the Tenth on a Plasma Wave: the Grand Challenge of Extending the High Energy Frontier	252
<i>Tom Katsouleas</i>	
Characteristics of Impurity-Dependent Breakdown in Helium Dielectric Barrier Discharge Jets	253
<i>Tsung-Chan Tsai, David Staack</i>	
Chaos in Atmospheric Pressure Plasma Jets	254
<i>James L. Walsh</i>	
Maxwell Demon and Its Instabilities	255
<i>Chi-Shung Yip, Noah Hershkowitz</i>	
Real-Time Observation of Runaway-Electron Breakdown of Air in the Laboratory Conditions	256
<i>Aleksandr V. Gurevich</i>	
On the Generation Mechanism of Supershort Avalanche Electron Beam During a Nanosecond Discharge in High Pressure Gases	257
<i>Victor F. Tarasenko</i>	
Generation of High Frequency O-Wave in Inhomogeneous Plasma in Presence of Drift Wave Turbulence	258
<i>Paramananda Deka, Anjan Borgohain</i>	
Experiments on MA Linear Transformer Drivers	259
<i>Ronald M. Gilgenbach</i>	
Modeling High-Voltage DC Breakdown for Single- and Multi-Stack Insulators	260
<i>Manuel P. Aldan, John P. Verboncoeur</i>	
Physics Investigations of Vacuum Ultraviolet Emission from Pulsed Atmospheric Discharges	261
<i>George R. Laity</i>	
Main Factors Influencing the Effect of Suppressing Multipactor by Periodic Surface Profiles and Resonant Magnetic Field	262
<i>Chao Chang</i>	
Review of High Voltage Silicon Carbide Device Research at the Army Research Laboratory	263
<i>Heather K. O' Brien</i>	
Magnesium Based Photocathode for Back-Lighted Thyatron	264
<i>Esin B. Sozer</i>	
Cold Atmospheric Plasma for Clinical Purposes, Promising Results in Patients and Future Applications	265
<i>Georg Isbary</i>	
Sterilization Effects of Biofilms by Ar/O₂ Plasma Jet	266
<i>Leila Taghizadeh</i>	
Direct and Indirect Treatment of Living Tissue: Dielectric Barrier Discharges vs. Plasma Jets	267
<i>Natalia Yu. Babaeva, Mark J. Kushner</i>	
On the Mechanism of Plasma Inducing Cell Apoptosis	268
<i>Xinpei Lu, Fei Zou</i>	
Robust Hydrogen Peroxide Enhanced Plasma Effluent for the Clinical Setting	269
<i>Mark Golkowski</i>	
Application of a Bifilar Helix Discharge in Endoscope Biopsy Channels for Plasma Decontamination and Biomedical Aspects	270
<i>Jorn Winter</i>	
Treatment of Water and E. coli Suspensions by Dielectric Barrier Discharge in Argon/Oxygen Atmospheres	271
<i>Katrin Oehmigen</i>	

Methicillin Resistant Staphylococcus Pseudintermedius Do Not Develop Resistance to Atmospheric Pressure Cold Plasma Discharges	272
<i>Igor Alexeff</i>	
Short Pulse ECR Ion Sources of Multicharged Ions.....	273
<i>Ivan V. Izotov</i>	
Runaway Electron Preionized Diffuse Discharges in Atmospheric Pressure Air with Point-to-Plane and Point-to-Point Gaps in Repetitive Pulsed Mode.....	274
<i>Victor F. Tarasenko</i>	
Advanced Dispenser Cathodes.....	275
<i>Robert L. Ives</i>	
Frequency Probe Measurements in Processing Plasmas.....	276
<i>David R. Boris</i>	
Studies of Electronegative Ar/O₂ Discharge in a Constricted Hollow Anode Plasma Source using Dual Probe Technique.....	277
<i>Mubarak A Mujawar</i>	
Investigation of the Current Density Properties of an Ion Beam Extracted from a Low Pressure Wire Discharge.....	278
<i>Renaud Gueroult</i>	
Plasma Cloud Generation with Intense Electric Fields Inside a Porous Spherical Cavity Resonator Excited by an External Plane Wave.....	279
<i>Paul A. Bernhardt</i>	
Engineering an RF Antenna for Use in Transparent Conducting Oxide Deposition.....	280
<i>Eithan Ritz</i>	
Experimental Investigations on the Magnetized Inductively Coupled Plasma for 450mm Semiconductor Wafer Processing.....	281
<i>Yun-Gi Kim, Ho-Jun Lee</i>	
Particle-In-Cell Simulations of Microdischarges with Extremely Small Characteristic Sizes	282
<i>Yingjie Li, David B. Go</i>	
Development of a Parallelized Two-Dimensional Axisymmetric Capacitively Coupled Plasma Simulator Using Graphics Processing Units.....	283
<i>In Cheol Song</i>	
Numerical Study of the Electron Dynamics in Radio-Frequency Plasmas at Atmospheric Pressure.....	284
<i>Torben Hemke</i>	
The Effect of Electron Cyclotron Resonance Heating on Breakdown for Start-up of a Tokamak.....	285
<i>Seung Bo Shim</i>	
Dynamics of Micro Cavity Plasma Arrays: Simulation of Ionization Wave Propagation.....	286
<i>Alexander Wollny</i>	
Some Results of Particle in Cell Simulations of Initial Argon Dielectric Barrier Discharges	287
<i>Manuel A. Huerta, Lars D. Ludeking</i>	
Amplification and Self-Compression of Ultrashort Electromagnetic Pulse Propagating along Quasi-Stationary Electron Beam.....	288
<i>Michael I. Yalandin</i>	
Progress on a 94 GHz Omniguide Traveling-Wave Tube Gain Experiment.....	289
<i>Dmitry Y. Shchegolkov</i>	
Some Unusual Properties of the Cylindrical Brillouin Flow	290
<i>David H. Simon</i>	
Recirculating Planar Magnetron Modeling and Experiments.....	291
<i>Matthew A. Franzi</i>	
Oscillation Thresholds in Coupled-Cavity TWTs.....	292
<i>George Stantchev</i>	
Effects of Random Circuit Fabrication Errors on Small Signal Gain in a Traveling Wave Tube.....	293
<i>Ian M. Rittersdorf</i>	
Thermal Axisymmetric Waves in Vortex-Free Beams from Diodes and Tetrodes	294
<i>Al Theiss</i>	
THz Sheet Beam Traveling Wave Tube Amplifier for Microwave Power Module (MPM) Application: MEMS-Fabrications and Characteristic Analysis	295
<i>Robert Barchfeld</i>	
ePLAS Modeling of Plasma Jets.....	296
<i>Rodney J. Mason</i>	
Ion Kinetic Effects in Hybrid-PIC Simulations of Merging Plasma Jets in the Plasma Liner Experiment.....	297
<i>Carsten H. Thoma</i>	

Kansas State University Dense Plasma Focus (KSU-DPF) Initial Neutron Results	298
<i>Mohamed I. Ismail</i>	
Short Circuit Test - Complete Analysis for the Dense Plasma Focus	299
<i>Amgad E. Mohamed</i>	
Dynamics of a Microscale Dense Plasma Focus	300
<i>William Pollard</i>	
A Computational Investigation of Synchrotron Radiation Generation in Laser-Wakefield Acceleration Experiments	301
<i>Paul G. Cummings, Alec G. R. Thomas</i>	
Observation of Energetic Deuteron Ions Accelerated from the Rear Surface of Laser-Irradiated Flat-Foil Targets	302
<i>Edward W. McCary</i>	
Analysis of New Mid-Atomic Number Precursor Wire Array Experiments on the 1-MA Pulsed Power Generator at UNR	303
<i>Austin Stafford</i>	
Enhanced X-ray Bremsstrahlung Emission from Xenon Plasmas Irradiated by an Intense KrF Laser	304
<i>Jack Davis</i>	
Diagnosing Copper Wire Array Implosions on Refurbished Z with Detailed Radiation-Hydrodynamic Models	305
<i>Robert W. Clark</i>	
Application of Triboluminescence Caused by Peeling Tapes to Roentgen Diagnosis	306
<i>Seizo Furuya</i>	
Thruster Evaluation of the MadHex Helicon Source	307
<i>John E. Scharer</i>	
Miniaturized Electric Propulsion in Low Temperature Co-Fired Ceramic	308
<i>Sonya Shawver</i>	
Plasma Characteristics of the Ferroelectric Plasma Thruster	309
<i>Brian T. Hutsel</i>	
Addressing Issues in Probing the Magnetic Cusp Region	310
<i>Aimee A. Hubble, John E. Foster</i>	
Cross-Field Electron Transport Through a Rotating Spoke in the Cylindrical Hall Thruster	311
<i>Charles Leland Ellison</i>	
Ion Energy Distribution Measurements of a Radiofrequency Plasma Source Immersed in Vacuum	312
<i>Adam Shabshelowitz, Alec D. Gallimore</i>	
Atmospheric-Pressure Air Plasma Jet and Its Application to Photoresist Material Etching	313
<i>Lijun Wang</i>	
A Two Dimensional Capillary Discharge Model Considering the Ablation-Deposition Process	314
<i>Xingwen Li</i>	
Amorphous Silicon & Silicon Nitride Etching with NF₃ DBD Plasma	315
<i>Dong Chan Seok</i>	
Integrated Approach in Predicting Damage to Components in ITER-like Fusion Devices during Plasma Instabilities	316
<i>Valeryi Sizyuk, Ahmed Hassanein</i>	
Surface Resistivity Modification of Polyimide Film by Plasma Source Ion Implantation*	317
<i>Byungjae Park</i>	
Study of Plasma in Bias Pulse Duty Ratio at ICP Etch Chamber	318
<i>Tae-Hoon Jo</i>	
Aerodynamically Enhanced Atmospheric Pressure Plasma Jet for Polymer Treatment	319
<i>Kapil Umesh Sawlani, John Edison Foster</i>	
Field Emission Characteristics of Cone-Shaped Carbon Nanotube Bundle by Plasma Treatments	320
<i>Sun Taek Lim, Gon Ho Kim</i>	
Plasma Diffusion in the Atmospheric Pressure Plasma Jets	321
<i>Yunjung Kim</i>	
Downstream Characterization of an Oxygen Atmospheric Pressure Plasma Jet	322
<i>Yao Jhen Yang</i>	
Optical and Electrical Diagnostics on Extended Dielectric Barrier Discharge Source	323
<i>Jungmi Hong</i>	
Modification of Hydrophobicity of Metallic Surfaces with an Atmospheric Plasma Jet	324
<i>Ruben Palma</i>	
Effect of Atmospheric Plasma Treatment on Edible Grains	325
<i>Martin Nieto-Perez</i>	

Comparison of Hydrophilization Effect by Various Gas Atmospheric Plasma	326
<i>Ryota Sasaki</i>	
Angular Dependences of Si₃N₄ Etch Rates and SiO₂-to-Si₃N₄ Etch Selectivity in C₄F₆/Ar/O₂/CH₂F₂ Plasmas	327
<i>Sung-Woon Cho, Chang-Koo Kim</i>	
Microwave Plasma Jet System Development at Atmospheric Pressure using 2.45 GHz GaN HEMT Devices	328
<i>Jae Duk Kim</i>	
Synthesis of Sulfonated Copolymers of Acrylamide by Plasma-Initiated Copolymerization Using Microwave Plasma	329
<i>Fatemeh Ghomashi</i>	
RF Atmospheric Plasma Based Air Filtration Using Porous Metals	330
<i>Daniel D. Wooten</i>	
Power Studies of an Underwater DBD Plasma Jet	331
<i>Sarah M. Nowak, John E. Foster</i>	
Microchannel Plasma Reactor for Gaseous Remediation and Destruction	332
<i>Benjamin C. Masters</i>	
Study on the Discharge under Water and Micro Bubble Generation	333
<i>Taihyeop Lho</i>	
Influence of Pulsed Electric Field (PEF) Treatment on the Extraction of Lipids from the Microalgae <i>Auxenochlorella Protothecoides</i>	334
<i>Martina Goettel</i>	
Plasma Engineering of Gases in Micro Ion Atomic Clocks	335
<i>Tony K. Statom</i>	
Atmospheric Argon Plasma Effects on Microbial Load of Wet-Blue Leathers	336
<i>Taner Aktan</i>	
Plasma Water Treatment by Electrical Discharge Methods	337
<i>Kadir Ozaltin</i>	
Hydrodynamic and Magnetically Driven Jets on the MAGPIE Generator	338
<i>Francisco Suzuki-Vidal</i>	
Plasma Focus Generated by Radial Foils on COBRA	339
<i>Jason M. Milhone</i>	
Interactions Between Two Plasma Bubbles Using Radial Foil Configurations	340
<i>Alexander Y. Gorenstein, Jo E. Kim</i>	
Computational Aspects of Simulating Megagauss-Magnetic-Field-Induced Plasma Formation on Thick-Wire Metallic Surfaces	341
<i>Irvin R. Lindemuth</i>	
High Resolution Imaging of K-Alpha X-Rays Using an Elliptically Bent Crystal	342
<i>Patrick X. Belancourt</i>	
Laser Interferometric Measurement for Astrophysics Diagnostics on Sphinx	343
<i>Damien Plouhinec</i>	
Development of an All Fiber Velocity Interferometer Dedicated to Measurement of Thermal Stress Waves on Samples Irradiated by Sphinx Z-Pinch Source	344
<i>Frederic Zucchini</i>	
Absolute Calibration Method for Nanosecond-Resolved, Time-Streaked, Fiber Optic Light Collection, Spectroscopy Systems	345
<i>Mark D. Johnston</i>	
Optical Emission Spectroscopy Measurements of Electron Beam-Generated Plasma in Argon	346
<i>Evgeniya H. Lock</i>	
Influence of Ne-Xe Gas Mixture Ratio on the Extreme Ultraviolet (EUV) Emission and Electron Temperature from the Coaxially Focused Plasma	347
<i>Sung Hee Lee</i>	
High-Sensitivity Interferometric Measurements of Gas Density Distributions from a PRS Nozzle Synchronized with a Heterodyne Interferometer	348
<i>David G. Phipps</i>	
Continued Development of Triple Plasma Gas Puff Nozzles for Z	349
<i>Robert E. Madden</i>	
Measurement of Neutral Hydrogen Density in a Helicon Plasma	350
<i>Matthew E. Galante</i>	
Calculation of RF Field Characteristics using Non-perturbative Optical Diagnostics with a Generalized Dynamic Stark Effect Model	351
<i>Elijah H. Martin</i>	

Etch Rate Monitoring with Optical Emission Spectra in Dry Etching Process	352
<i>Sang Wuk Park</i>	
Study of Resonant Properties of Hairpin Probe for High-Density Operation	353
<i>Gurusharan Singh Gogna</i>	
A High Wavenumber Poloidal Scattering System for the NSTX Tokamak	354
<i>Calvin W. Domier</i>	
Measurement of D-T Branching Ratio Based on Cross-Calibration to D-3He	355
<i>Yongho Kim</i>	
Proton Probing of Magnetic Fields in Exploding Wire Experiments	356
<i>Derek A. Mariscal</i>	
Alignment Commissioning of the Neutron Imager for the National Ignition Facility	357
<i>Owen B. Drury</i>	
Coded Aperture Imaging Technique for Investigation of Fusion Source Spatial Distribution in Plasma Focus Device	358
<i>Alireza Talebitaher</i>	
In-Situ Preparation of Radioactive Tracers in NIF Capsules	359
<i>Mark A. Stoyer</i>	
Scaling of Bright Spots in X Pinches from 1 MA to 6 MA	360
<i>Daniel B. Sinars</i>	
Experimental Investigations of Single-Layer and Nested X-Pinches at 1-MA	361
<i>Jian Wu</i>	
Optimization of Dense Plasma Focus for Higher Neutron Yield	362
<i>Syed M Hassan</i>	
High Performance Repetitive Low Energy Miniature Plasma Focus Neutron Source: Record Yield, Scaling Laws and Yield Stability	363
<i>Rishi Verma</i>	
Laser-Produced Directed Neutron Beams	364
<i>George M Petrov</i>	
Experiments to Characterize a >100 keV, High Resolution X-Ray Backlighter for Cylindrical Imploding Liners at the Z Machine	365
<i>Timothy J. Webb</i>	
Observations of Strong Areal Mass Oscillations in a Rippled Target Hit by a Short Pulse on the Nike Laser	366
<i>Y. Aglitskiy</i>	
Wideband Fast Wave Amplifiers	367
<i>Colin G. Whyte</i>	
Recent Tests on a Multi-Megawatt 95 GHz Gyrotron	368
<i>Stephen Cauffman</i>	
Experimental Results of the Start-up Scenario for a 1.5 MW, 110 GHz Pulsed Gyrotron	369
<i>David S. Tax</i>	
Ultimate Choice of Operating Modes in High-Power Gyrotrons	370
<i>Oleksandr V. Sinitsyn</i>	
Second Harmonic Gyrotron Based on a 12 T Superconducting Magnet	371
<i>Arne W. Fliflet, Steven H. Gold</i>	
Fundamental and Harmonic Mode Competition in Gyrotron Oscillator	372
<i>Shih-Hsiang Kao</i>	
Destabilization of Backward Waves by Space Charge in Gyrotron Beams	373
<i>Jiao Yu</i>	
Reformulation of Gas Discharge Theory Using Data from ICPs and Helicons	374
<i>Francis F. Chen, Davide Curreli</i>	
Verification of Collisionless Model of Capacitive Rf Discharges by Particle-in-Cell Simulations	375
<i>Ying Wang</i>	
Probe Diagnostics of RF Plasmas for Material Processing	376
<i>Valery Godyak</i>	
Analysis of the Interaction of Free and Bound Microplasmas	377
<i>Y. H. Kim</i>	
Communication Through a Plasma Sheath Around a Fast Moving Vehicle	378
<i>Vladimir Sotnikov</i>	
Controlled Study of Acoustic Gravity Waves (AGW) Generated by Anomalous Heat Sources	379
<i>Rezy Pradipta</i>	

Room Scattering Effects on the Measured Spatial Distribution of Delayed Photofission Neutrons from Depleted Uranium.....	380
<i>John P. Apruzese</i>	
New Reflex Triode Configuration for Improved Moderate-Energy X-Ray Production.....	381
<i>Bruce V. Weber</i>	
Load Impedance Dynamics in the RITS-6 Self-Magnetic-Pinch Diode.....	382
<i>Timothy J. Renk</i>	
3-D Green's Function Modeling for Moderately Relativistic Charged-Particle Beams in Cylindrical Geometry	383
<i>Kostyantyn Ilyenko, Tetyana Yu Yatsenko</i>	
Study on Behaviors of Laser Produced Plumes for Fusion Material Ablation.....	384
<i>Kazuo A. Tanaka</i>	
Measurement of Spatial Distribution of Fusion Reactions in an Inertial Electrostatic Confinement Fusion Device Driven by a Ring-Shaped Magnetron Ion Source	385
<i>Taiju Kajiwara</i>	
Modeling and Simulation of the Erosion Damage in Tokamak Devices During Plasma Instabilities	386
<i>Filippo Genco, Ahmed Hassanein</i>	
Probing the Ionosphere with Rockets and Radio Waves: A Study of Plasma Waves and Instabilities in the Upper Atmosphere	387
<i>Paul A. Bernhardt</i>	
The Study of Ablation and Implosion Dynamics in Closely Coupled Nested Cylindrical and Star Wire Array Z Pinches	388
<i>Daniel Papp</i>	
End-on Laser Probing of the Ablation Phase of Wire Array Z-Pinch Implosions on the MAGPIE Generator	389
<i>George F. Swadling</i>	
Atomic Model and Synthetic Diagnostics for Large Scale Parallel Simulations of Wire Array Z-Pinches.....	390
<i>Nicolas P. Niasse, Jeremy P. Chittenden</i>	
Modeling of Gas Puff Z-Pinch Experiments at the ZR Facility	391
<i>Christopher S Kueny</i>	
Plasma Instability Measurements on Planar Al Foil Loads Driven Using the MAIZE 1-MA LTD Facility	392
<i>Jacob C. Zier</i>	
Ablation Dynamics, Precursor Formation, and Instability Studies on Thin Foil Copper Liners	393
<i>Isaac C. Blesener</i>	
Time Evolution of Z-Pinch Dynamics and Radiative Characteristics of Wire Arrays on Zebra at UNR.....	394
<i>A. S. Safronova</i>	
X-Ray Pulse Shaping from Tungsten-Based Multi-Planar Wire Arrays.....	395
<i>Glenn Osborne</i>	
X-Ray Yield from Pinch Target Implosions.....	396
<i>David A. Martinez</i>	
Progress in Field Ionization Source Development for Compact Neutron Generators.....	397
<i>Arun Persaud</i>	
The Klein Tunneling Modified Field-Emission Model for a Vertical-Aligned Single-Layer Graphene Sheet.....	398
<i>Song Sun, Lay Kee Ang</i>	
An Exact Formulation of Thin Film Contact Resistance with Dissimilar Materials.....	399
<i>Peng Zhang</i>	
Field Emission from Nanocrystalline Graphite/Carbon Nanotube Emitter from Room Temperature to 1000 C	400
<i>Heinz H. Busta</i>	
A Plasma Source for High Power Microwave Interaction Studies.....	401
<i>V. P. Anitha</i>	
Statistical Modeling of High Power Microwave Surface Flashover Delay Times.....	402
<i>Jonathan Foster</i>	
Distributed Microwave Breakdown for Shielding of Sensitive Electronics Against Frontdoor Overloads.....	403
<i>Florent Christophe</i>	
Preliminary Design of the ITER ECH Upper Launcher	404
<i>Dirk C. Strauss</i>	

Characterizations on a 2.45 GHz Microwave Induced Atmospheric Pressure Plasma Torch	405
<i>Zihao Ouyang</i>	
Towards the Purification of Liquid Water by Direct Plasma Injection: Technical Challenges and Ongoing Efforts at the University of Michigan Plasma Science and Technology Laboratory	406
<i>John E. Foster</i>	
An Investigation of Micron Diameter Exposed-Electrode Single Barrier Dielectric Barrier Discharges	407
<i>Mohammed U. Siddiqui</i>	
Al/Al₂O₃ Micro Channel Plasma Chemical Reactor for Ozone Synthesis	408
<i>J. H. Cho</i>	
Resonant Oscillations of Air Bubbles Driven by a Time Varying Electric Field	409
<i>Bradley S. Sommers, John E. Foster</i>	
Adsorption and Decomposition of Perfluorooctane Sulfonic Acid on Plasma-water Interface.....	410
<i>Nozomi Takeuchi</i>	
Decontamination of Salmonella on Sliced Fruits and Vegetables Surfaces using a Direct-Current, Atmospheric-Pressure Cold Plasma.....	411
<i>Weifeng Nian</i>	
Investigation of SiO₂ Etch Properties Using Pulse Power in Capacitively Coupled Plasmas.....	412
<i>Sang-Heon Song, Mark J. Kushner</i>	
Anomalous Voltage Trends in Electronegative Capacitively Coupled Plasmas	413
<i>Ankur Agarwal</i>	
Temporal Temperature Evolution of Atmospheric Pressure Streamer Discharge in Air	414
<i>Scott J. Pendleton</i>	
Efficacy of Air Plasma Microjet for Wound Sterilization	415
<i>Amber M. Mattson</i>	
An Atmospheric Pressure Non-Thermal Plasma Needle for Endodontic Biofilm Disinfection.....	416
<i>Chunqi Jiang</i>	
Simulation of Atmospheric Pressure Ionization Waves Propagating Through Flexible Capillary Tubes and Impinging onto a Target	417
<i>Ziongmin Xiong, Mark J. Kushner</i>	
Author Index	

