Chronological Index

B94-044 Localization of Aeroelastic Modes in Mistuned High-Energy Turbines. Christophe Pierre, *University of Michigan*; Todd E. Smith, *Sverdrup Technology, Inc.*; and Durbha V. Murthy, *University of Toledo* (**10**, 3, p. 318) Article based on AIAA Paper 91-3379

B94-045 Axial Compressor Performance During Surge. I. J. Day, *University of Cambridge, England, UK* (**10**, 3, p. 329) Article

B94-046 Efficient Method for Predicting Rotor/Stator Interaction. S. H. Chen, A. H. Eastland, and E. D. Jackson, *Rockwell International Corporation* (**10**, 3, p. 337) Article

B94-047 Experimental Investigation of Counter-Rotating Propfan Flutter at Cruise Conditions. Oral Mehmed and Anatole P. Kurkov, *NASA Lewis Research Center* (**10**, 3, p. 343) Article based on AIAA Paper 93-1634 CP931

B94-048 Dynamic Aeroelastic Stability of Vertical-Axis Wind Turbines Under Constant Wind Velocity. Fred Nitzsche, *DLR, German Aerospace Research Establishment, Germany* (**10**, 3, p. 348) Article

B94-049 Low-Noise, High-Strength, Spiral-Bevel Gears for Helicopter Transmission. David G. Lewicki and Robert F. Handschuh, *NASA Lewis Research Center*; Zachary S. Henry, *Bell Helicopter Textron, Inc.*; and Faydor L. Litvin, *University of Illinois at Chicago* (**10**, 3, p. 356) Article based on AIAA Paper 93-2149

B94-050 Estimation of Fatigue Strength Enhancement for Carburized and Shot-Peened Gears. Katsumi Inoue and Masana Kato, *Tohoku University, Japan* (**10**, 3, p. 362) Article based on AIAA Paper 93-2294

B94-051 Multiple Hole Ejector Performance with Short Wide Angle Diffusers. Kenneth C. Cornelius and Gerald A. Lucius, *Wright State University* (**10**, 3, p. 369) Article

B94-052 Planar KrF Laser-Induced OH Fluorescence Imaging in a Supersonic Combustion Tunnel. T. M. Quagliaroli, G. Laufer, S. D. Hollo, R. H. Krauss, R. B. Whitehurst III, and J. C. McDaniel Jr., *University of Virginia* (**10**, 3, p. 377) Article based on AIAA Paper 92-3346

B94-053 Injection of Bubbling Liquid Jets from Multiple Injectors into a Supersonic Stream. Takakage Arai and Joseph A. Schetz, *Virginia Polytechnic Institute and State University* (**10**, 3, p. 382) Article based on AIAA Paper 92-5060

B94-054 Structure and Penetration of a Supercritical Fluid Jet in Supersonic Flow. J. C. Hermanson, P. Papas, and I. W. Kay, *United Technologies Research Center* (**10**, 3, p. 387) Article

B94-055 Effect of External Forcing on Droplet Dispersion in a Developing Shear Layer. S. K. Aggarwal and Y. Xiao, *University of Illinois at Chicago* (**10**, 3, p. 395) Article

B94-056 Interlaboratory Comparison of Phase Doppler Measurements in a Research Simplex Atomizer Spray. V. G. McDonell and G. S. Samuelsen, *University of California, Irvine*; and M. R. Wang, C. H. Hong, and W. H. Lai, *National Cheng Kung University, Taiwan, ROC* (**10**, 3, p. 402) Article based on AIAA Paper 92-3233

B94-057 Motor and Plume Particle Size Measurements in Solid Propellant Micromotors. D. Laredo, J. D. McCrorie II, J. K. Vaughn, and D. W. Netzer, *Naval Postgraduate School* (**10**, 3, p. 410) Article

B94-058 Thermal Radiation in Gas Core Nuclear Reactors for Space Propulsion. Stephen A. Slutz, Randall O. Gauntt, and Gary A. Harms, *Sandia National Laboratories*; and Thomas Latham, Ward Roman, and Richard J. Rodgers, *United Technologies Research Center* (**10**, 3, p. 419) Article

B94-059 Hierarchical Analysis of Options for Lunar-Surface Power. R. Bruce Matthews, *Los Alamos Laboratory*; Edmund P. Coomes, *Pacific Northwest Laboratory*; and Ehsan U. Khan, *Department of Energy* (**10**, 3, p. 425) Article

B94-060 Preliminary Investigations on Improving Air-Augmented Rocket Performance. K. N. Anil and K. A. Damodaran, *Indian Institute of Technology* (**10**, 3, p. 432) Technical Note

B94-061 Turbulent Combustion Regimes for Hypersonic Propulsion Employing Hydrogen-Air Diffusion Flames. G. Balakrishnan and F. A. Williams, *University of California, San Diego* (**10**, 3, p. 434) Technical Note

B94-062 Experimental Study of a Model Gas Turbine Combustor Swirl Cup, Part I: Two-Phase Characterization. Hongyu Wang, Vincent G. McDonell, William A. Sowa, and Scott Samuelsen, *University of California, Irvine* (**10**, 4, p. 441) Article

B94-063 Experimental Study of a Model Gas Turbine Combustor Swirl Cup, Part II: Droplet Dynamics. Hongyu Wang, Vincent G. McDonell, William A. Sowa, and Scott Samuelsen, *University of California, Irvine* (**10**, 4, p. 446) Article

B94-064 Characteristics of Sprays Produced by Coaxial Airblast Atomizers. Y. Hardalupas and J. H. Whitelaw, *Imperial College of Science, Technology and Medicine, England, UK* (**10**, 4, p. 453) Article based on AIAA Paper 93-0698

B94-065 Nonequilibrium Combustion Model for Fuel-Rich Gas Generators. Robert O. Foelsche, Joseph M. Keen, and Wayne C. Solomon, *University of Illinois at Urbana–Champaign*; and Parker L. Buckley and Edwin Corporan, *Wright-Patterson Air Force Base* (**10**, 4, p. 461) Article based on AIAA Paper 93-2041

B94-066 Assumed Joint Probability Density Function Approach for Supersonic Turbulent Combustion. R. A. Baurle, G. A. Alexopoulos, and H. A. Hassan, *North Carolina State University* (**10**, 4, p. 473) Article based on AIAA Paper 92-3844

B94-067 Air Liquefaction and Enrichment System Propulsion in Reusable Launch Vehicles. W. H. Bond and A. C. Yi, *Rockwell International Corporation* (**10**, 4, p. 485) Article based on AIAA Paper 93-2025

B94-068 Hydrogen Recombination Kinetics and Nuclear Thermal Rocket Performance Prediction. Kyle K. Wetzel and Wayne C. Solomon, *University of Illinois at Urbana–Champaign* (**10**, 4, p. 492) Article based on AIAA Paper 93-2499

B94-069 Formulation, Predictions, and Sensitivity Analysis of a Pyrotechnically Actuated Pin Puller Model. Keith A. Gonthier and Joseph M. Powers, *University of Notre Dame* (**10**, 4, p. 501) Article

B94-070 Application of Dynamical Systems Theory to Nonlinear Combustion Instabilities. Craig C. Jahnke, *Clarkson University*; and F. E. C. Culick, *California Institute of Technology* (**10**, 4, p. 508) Article based on AIAA Paper 93-0114

B94-071 New Tube End Closure System for the Ram Accelerator. David W. Bogdanoff, *Eloret Institute* (**10**, 4, p. 518) Article

B94-072 Improved Method for Estimation of the Maximum Instantaneous Distortion Values. D. W. Liang and S. Y. Zhang, *Nanjing University of Aeronautics and Astronautics, PRC* (**10**, 4, p. 522) Article

D. Papailiou, *National Technical University of Athens, Greece* (**10**, 5, p. 729) Article based on AIAA Paper 93-3117

B94-101 Investigation of Supersonic Jet Plumes Using an Improved Two-Equation Turbulence Model. B. Lakshmanan, *Old Dominion Unversity*; and K. S. Abdol-Hamid, *Analytical Services and Materials, Inc.* (**10**, 5, p. 736) Article based on AIAA Paper 92-2604 CP926

B94-102 Supersonic-Ejector Characteristics Using a Petal Nozzle. A. K. Narayanan and K. A. Damodaran, *Indian Institute of Technology* (**10**, 5, p. 742) Technical Note

B94-103 Combustion of Microemulsion Sprays. I. Ahmad and S. R. Gollahalli, *University of Oklahoma* (**10**, 5, p. 744) Technical Note

B94-104 Pulsed Jets in Supersonic Crossflow. Howard Randolph and Larry Chew, *University of Central Florida*; and Hamid Johari, *Worcester Polytechnic Institute* (**10**, 5, p. 746) Technical Note

B94-105 Effect of Multidimensional Flamelets in Composite Propellant Combustion. Sung-Taick Lee, Edward W. Price, and Robert K. Sigman, *Georgia Institute of Technology* (**10**, 6, p. 761) Article

B94-106 Coupling Between Vorticity and Pressure Oscillations in Combustion Instability. Habib N. Najm and Ahmed F. Ghoniem, *Massachusetts Institute of Technology* (**10**, 6, p. 769) Article based on AIAA Paper 89-2665

B94-107 Modeling of Supersonic Turbulent Combustion Using Assumed Probability Density Functions. R. A. Baurle, G. A. Alexopoulos, and H. A. Hassan, *North Carolina State Univer-sity* (**10**, 6, p. 777) Article based on AIAA Papers 93-2197 and 93-2198

B94-108 OH Laser-Induced Fluorescence Velocimetry Technique for Steady, High-Speed, Reacting Flows. Kurt G. Klavuhn, Gautam Gauba, and James C. McDaniel, *University of Virginia* (**10**, 6, p. 787) Article based on AIAA Paper 92-3422

B94-109 Multifunction Droplet Imaging and Velocimetry System for Spray Jets. Tzong H. Chen, Larry A. Roe, and Abdollah S. Nejad, *Wright Laboratory* (**10**, 6, p. 798) Article based on AIAA Paper 93-0415

B94-110 Thrust Loss Due to Supersonic Mixing. Dimitri Papamoschou, *University of California, Irvine* (**10**, 6, p. 804) Article

B94-111 Optimization of Heat Transfer in a High-Energy Booster Rocket. Christopher Tarpley and Mark J. Lewis, *University of Maryland* (**10**, 6, p. 810) Article based on AIAA Paper 92-4689 CP9213

B94-112 Pellet Bed Reactor Concepts for Nuclear Propulsion Applications. Mohamed S. El-Genk, Nicholas J. Morley, Dennis G. Pelaccio, and Albert Juhasz, *University of New Mexico* (**10**, 6, p. 817) Article based on AIAA Paper 93-2112

B94-113 Launch Vehicle Performance Using Metallized Propellants. Bryan Palaszewski, *NASA Lewis Research Center*; and Richard Powell, *NASA Langley Research Center* (**10**, 6, p. 828) Article based on AIAA Paper 91-2050

B94-114 Production and Use of Metals and Oxygen for Lunar Propulsion. Aloysius F. Hepp, Dianne L. Linne, Geoffrey A. Landis, and Mary F. Wadel, *NASA Lewis Research Center*; and James E. Colvin, *University of Arizona* (**10**, 6, p. 834) Article

B94-115 Numerical Study of the Performance of Swept, Curved Compression Surface Scramjet Inlets. John J. Korte, *NASA Langley Research Center*; D. J. Singh, *Analytical Services and Materials, Inc.*; Ajay Kumar, *NASA Langley Research Center*; and Aaron H. Aus-lender, *Lockheed Engineering and Sciences Company, Inc.* (**10**, 6, p. 841) Article based on AIAA Paper 93-1837

B94-116 F/A-18 Inlet Calculations at 60-Deg Angle of Attack and 10-Deg Sideslip. S. D. Podleski, *NYMA, Inc.* (**10**, 6, p. 848) Article based on AIAA Paper 93-1806

B94-117 Nonlinear Dynamic Simulation of Single- and Multi-spool Core Engines, Part I: Computational Method. M. T. Schobeiri, M. Attia, and C. Lippke, *Texas A&M University* (**10**, 6, p. 855) Article based on AIAA Paper 93-2580

B94-118 Nonlinear Dynamic Simulation of Single- and Multi-spool Core Engines, Part II: Simulation, Code Validation. M. T. Schobeiri, M. Attia, and C. Lippke, *Texas A&M University* (**10**, 6, p. 863) Article based on AIAA Paper 93-2580

B94-119 High Reynolds Number and Turbulence Effects on Turbine Heat Transfer. Frederick C. Yeh, Steven A. Hippensteele, G. James Van Fossen, and Philip E. Poinsatte, *NASA Lewis Research Center*; and Ali Ameri, *University of Kansas* (**10**, 6, p. 868) Article based on AIAA Paper 93-2252

B94-120 Numerical Solutions of Two-Dimensional Multistage Rotor/Stator Unsteady Flow Interactions. R.-J. Yang and S.-J. Lin, *Rockwell International* (**10**, 6, p. 876) Article

B94-121 Development of Hypersonic Engine Seals: Flow Effects of Preload and Engine Pressures. Zhong Cai, Rajakkannu Mutharasan, and Frank K. Ko, *Drexel University*; and Bruce M. Steinetz, *NASA Lewis Research Center* (**10**, 6, p. 884) Article based on AIAA Paper 93-1998

B94-122 Adaptive Modeling of Jet Engine Performance with Application to Condition Monitoring. B. Lambiris, K. Mathioudakis, A. Stamatis, and K. Papailiou, *National Technical University of Athens, Greece* (**10**, 6, p. 890) Article

B94-123 Ply Layup Optimization and Micromechanics Tailoring of Composite Aircraft Engine Structures. Srinivas Kodiyalam and V. N. Parthasarathy, *General Electric Corporate R&D Center*; and Michael S. Hartle and Richard L. McKnight, *General Electric Aircraft Engines* (**10**, 6, p. 897) Article based on AIAA Paper 93-1583

B94-124 Similarity Relation for Maximal Gas Compression by Strong Ionizing Shocks. I. M. Rutkevich and M. Mond, *Ben-Gurion University of the Negev, Israel* (**10**, 6, p. 906) Technical Note

B94-125 Solid Rocket Motor Temperature Sensitivity. J. R. Osborn and S. D. Heister, *Purdue University* (**10**, 6, p. 908) Technical Note

B94-126 Pyrometry for Turbine Applications in the Presence of Reflection and Combustion. E. Suarez, *Pratt & Whitney* (**10**, 6, p. 911) Technical Note based on AIAA Paper 93-2374

B94-127 Stationkeeping with Two-Way Electromagnetic Launchers. Gerald David Nordley (**10**, 6, p. 912) Technical Note

B94-128 Simple Estimation Algorithm for Performance-Seeking Controllers. Martín D. España, *National Research Council, NASA Dryden Flight Research Center* (**10**, 6, p. 914) Technical Note