

Thermal Control

- Conceptual Fluid-Dynamic Heat Rejection System for Space Station Application A86-099
 Space Constructible Radiator On-Orbit Assembly A86-069
 Effects of a Simulated Synchronous Altitude Environment on Contaminated Optical Solar Reflectors A86-067
 Cryogenic and Thermal Design for the Space Infrared Telescope Facility (SIRTF) A86-004

Thermal Modeling and Analysis

- Finite-Element Thermal-Structural Analyses of a Cable-Stiffened Orbiting Antenna A86-107
 Thermal Network Correction by the Optimization Method A86-094
 Aerothermodynamic Parameter Estimation from Shuttle Thermocouple Data During Transient Flight Test Maneuvers A86-079
 Three-Dimensional Thermal Analysis for the Inertial Upper Stage SRM-1 Techroll Housing A86-077

- Thermal Response of Integral, Multicomponent Composite Thermal Protection Systems A86-073
 Solar Array "Hot-Spot" Testing and Analysis A86-070
 Development of the Payload Module Radiator for the Broadcasting Satellite A86-061
 Thermal Analysis Technique Applied to a Conformal Phased Array Antenna A86-041
 The Effect of Geometry on Contact Conductance of Contiguous Interfaces A86-040
 Three-Dimensional, Primitive-Variable Model for Solid-Fuel Ramjet Combustion A86-017
 Cryogenic and Thermal Design for the Space Infrared Telescope Facility (SIRTF) A86-004
 Droplet Radiator Systems for Spacecraft Thermal Control A86-002

Thermal Surface Properties

- Measurement of Particle Contamination A86-111

- Effects of a Simulated Synchronous Altitude Environment on Contaminated Optical Solar Reflectors A86-067
 Space Vehicle Glow Measurements on STS 41-D A86-034
 Response of Inconel 617 to Sea Salt and Re-Entry Conditions A86-014

Thermochemistry and Chemical Kinetics

- Orbital Supply of Liquid Helium A86-068
 Effect of Heating Rate on Thermal Decomposition Kinetics of Fiberglass Phenolic A86-058
 Determining Atmospheric Density Using a Space-Launched Projectile A86-047
 A Calorimetric Bomb for Determining Heats of Combustion of Hypergolic Propellants A86-020

Thermophysical Properties of Matter

- Electron Radiation Effects on the Thermal Expansion of Graphite Resin Composites A86-108
 Orbital Supply of Liquid Helium A86-068

Author Index

- Abe, T., A86-025
 Agnone, A. M., A86-078
 Alario, J. P., A86-069
 Allegre, J., A86-064
 Allen, D. H., A86-032, A86-050
 Almes, P. C., A86-027
 Anderson, M. S., A86-051
 Audley, D. R., A86-079
 Bachtel, F., A86-097
 Baker, M., A86-053
 Banken, G. J., A86-048
 Belvin, W. K., A86-013
 Besse, A., A86-021
 Birch, S. F., A86-048
 Bird, G. A., A86-063
 Blanchard, R. C., A86-003
 Boettcher, R.-D., A86-082
 Bowles, D. E., A86-108
 Brenza, P. T., A86-084
 Brock, F. J., A86-063
 Brooks, W. F., A86-004
 Brown, J. J., A86-037
 Brown, K. G., A86-047
 Buck, G. M., A86-003
 Burch, J. L., A86-055
 Champion, K., A86-041
 Cerro, J. A., A86-028
 Chang, I-Shih, A86-077
 Chapman, G. T., A86-045
 Chater, W. T., A86-056
 Chien, K.-Y., A86-043
 Chow, L. C., A86-092
 Clark, R. K., A86-014
 Clement, L. W., A86-080
 Clifton, K. S., A86-034
 Cline, J. K., A86-027
 Cline, M. C., A86-075
 Compton, H. R., A86-096
 Conn, D. W., A86-084
 Cooke, D. L., A86-114
 Dai, C. H., A86-060
 Dalgarno, A., A86-110
 Daneshvar, K., A86-060
 Dankert, C., A86-082
 Davidovitch, A., A86-102
 Dechaumphai, P., A86-107
 Dettleff, G., A86-062, A86-082
 Dixon, M., A86-072
 Dodge, F. T., A86-031
 East, R. A., A86-117
 Eastman, D. W., A86-019
 Edberg, D. L., A86-049
 Ehlers, H. K. F., A86-066
 Ericsson, L. E., A86-023
 Ewing, E. S., A86-012
 Fey, T. A., A86-031
 Findlay, J. T., A86-096
 Florence, D. E., A86-012
 Fogdall, L. B., A86-067
 Fromhold, A. T., A86-060
 Funabiki, K., A86-025
 Gallagher, J. J., A86-041
 Galpin, P. F., A86-040
 Garrett, H. B., A86-054
 Garriott, O. K., A86-034
 Gause, R., A86-034
 Gentry, R. A., A86-075
 Glaser, R. J., A86-033
 Gnoffo, P. A., A86-044
 Graham, J. L., A86-060
 Gu, W., A86-116
 Habib, I. S., A86-022
 Haisler, W. E., A86-032, A86-050
 Heller, R. A., A86-089
 Henderson, R. G., A86-091
 Henley, M. W., A86-016
 Hermel, J., A86-098
 Hodge, J. K., A86-079
 Hoffman, J. D., A86-008, A86-037
 Hokenson, G. J., A86-113
 Holcomb, J. E., A86-048
 Housner, J. M., A86-013
 Howey, C. K., A86-056
 Hsieh, T., A86-043
 Hueser, J. E., A86-063
 Hui, W. H., A86-024
 Hunter, L. W., A86-084
 Hussey, J., A86-069
 Hutt, G. R., A86-117
 Hyde, J. C., A86-075
 Itakura, T., A86-061
 Jackson, L. R., A86-028
 Jain, S. R., A86-020
 Jones, K. M., A86-009
 Jongeward, G. A., A86-088
 Kalyanasundaram, S., A86-050
 Kana, D. D., A86-031
 Katz, A., A86-102
 Katz, I., A86-088, A86-114
 Kawashima, J., A86-061
 Kawashima, N., A86-035
 Kayser, D. C., A86-056
 Keddy, E. S., A86-071
 Kelley, J. G., A86-111
 King, M. K., A85-059
 Kittel, P., A86-068
 Kobayashi, Y., A86-099
 Kolodziej, P., A86-073
 Koppenwallner, G., A86-082
 Kosik, J. C., A86-018
 Kui, C. P., A86-033
 Kuriki, K., A86-035
 Kuriyama, Y., A86-061
 Kushida, K., A86-061
 Laux, U., A86-083
 Lebon, B. A., A86-026
 Lee, J. H., A86-004
 Leger, L., A86-034
 Leger, L. J., A86-087
 Legge, H., A86-062, A86-082
 Leiser, D. B., A86-073
 Lengrand, J. C., A86-064
 Leung, P., A86-054
 Levin, D., A86-102
 Lewis, C. H., A86-007
 Lilley, J. R., Jr., A86-114
 Lilley, J. S., A86-008, A86-104
 Lindemann, A. M., A86-059
 Lips, K. W., A86-029
 Little, S. A., A86-060
 Liu, C. K., A86-074
 Lutz, J. D., A86-050
 Mahefkey, E. T., A86-092
 Mandell, M. J., A86-088
 Manikowski, A. F., Jr., A86-074
 Martin, J. A., A86-093, A86-106, A86-115
 Mattick, A. T., A86-002
 Matty, J. J., A86-001
 Mayer, E., A86-098
 Mayer, H. L., A86-011
 McWherter, M., A86-010
 Melfi, L. T., Jr., A86-063
 Mende, S. B., A86-034
 Menees, G. P., A86-047
 Metz, R. N., A86-086
 Meyer, R., A86-083
 Miller, C. G., A86-044
 Milshtein, T., A86-017
 Morgan, R. G., A86-081
 Mullen, C. R., A86-067
 Muntz, E. P., A86-072
 Murbach, M. S., A86-076
 Murthy, H. N., A86-094
 Naes, L. G., A86-074
 Naftel, J. C., A86-106
 Narayana, K. B., A86-094
 Neff, J. A., A86-067
 Nelson, H. F., A86-090
 Netzer, D. W., A86-017
 Nimmo, N. A., A86-051
 Ninan, K. N., A86-058
 Noack, R. W., A86-010
 Obayashi, T., A86-035

Continued from previous page

- Oberkampff, W. L., A86-010
 Otterstedt, P. J., A86-069
 Pagano, N. J., A86-030
 Pandey, A. K., A86-107
 Papula, P., A86-070
 Paradis, L. R., A86-041
 Park, C., A86-047
 Pasley, G. F., A86-091
 Peercy, R. L., Jr., A86-036
 Penzo, P. A., A86-011
 Pepper, W. B., Jr., A86-039
 Perini, L. L., A86-084
 Peterson, M. A., A86-109
 Phillips, W. P., A86-096
 Piesik, J. T., A86-038
 Pitts, W. C., A86-076
 Poll, D. I. A., A86-105
 Prabhu, D. K., A86-046
 Pranke, J. B., A86-056
 Prenger, F. C., A86-071
 Prucz, J., A86-100, A86-101
 Purohit, S. C., A86-103
- Raasch, R. F., A86-036
 Raffin, M., A86-064
 Rajendran, G., A86-020
 Rasmussen, M. L., A86-080
 Reddy, A. D., A86-100
 Rehfield, L. W., A86-100
 Ringel, M., A86-042
 Roberts, D. W., A86-048
 Robinson, P. A., Jr., A86-054
 Roche, J. C., A86-088
 Rogers, A. W., A86-098
 Romine, G. L., A86-006
 Rosenwasser, I., A86-005
 Rozon, B. J., A86-040
 Rubin, A. G., A86-021
 Sabot, S. M., A86-045
 Sasaki, S., A86-035
 Schlitt, R., A86-083
 Schneider, G. E., A86-040
 Scialdone, J. J., A86-065
 Seginer, A., A86-005, A86-042
 Sena, J. T., A86-071
 Senol, A. J., A86-006
- Shieh, R. C., A86-052
 Shukis, F. A., A86-041
 Singhal, A. K., A86-097
 Smith, M., A86-073
 Soileau, K. M., A86-085
 Song, D. J., A86-007
 Stalker, R. J., A86-081
 Stern, S. A., A86-085
 Stewart, D. A., A86-073
 Stowell, C., A86-070
 Swenson, G. R., A86-034
 Sykes, G. F., A86-108
 Taff, L. G., A86-057
 Tam, L. T., A86-097
 Tannehill, J. C., A86-046
 Taussig, R. T., A86-002
 Taylor, A. H., A86-028
 Tewell, J. R., A86-012
 Thangjitham, S., A86-089
 Thornton, E. A., A86-107
 Tompkins, S. S., A86-108
 Tong, B., A86-024
 Trudell, R. W., A86-100
- Tucker, E. O., A86-090
 Turriziani, R. V., A86-106
 Unnam, J., A86-014
 Unruh, J. F., A86-031
 Van Tuyl, A. H., A86-043
 Vaniman, J., A86-097
 Vigneron, F. R., A86-029
 Visentine, J. T., A86-087
 Wada, B. K., A86-033
 Weeks, G. E., A86-015
 Whitaker, A. F., A86-060
 Whittlesey, A. C., A86-054
 Wierzbicki, T., A86-112
 Wilder, S. E., A86-044
 Wilson, J. F., A86-047
 Winchenbach, G. L., A86-045
 Worley, S. D., A86-060
 Yanagisawa, M., A86-035
 Yee, J.-H., A86-110
 Yokajty, J. E., A86-092
 Yovanovich, M. M., A86-040
 Yue, D. K., A86-112

Chronological Index

A85-059 Prediction of Burning Rates in Nozzleless Rocket Motors. Merrill K. King, *Atlantic Research Corporation* (22, 4, p. 394) Synoptic based on AIAA Paper 82-1200

Errata by Merrill K. King, *Atlantic Research Corporation* (23, 5, p. 544)

A86-001 High-Pressure Ablation Measurements in the AEDC Track G. J. J. Matty, *Arnold Engineering Development Center, Arnold Air Force Station* (23, 1, p. 4) Article based on AIAA Paper 84-1804

A86-002 Droplet Radiator Systems for Spacecraft Thermal Control. Robert T. Taussig, *Spectra Technology, Incorporated*; and A. T. Mattick, *University of Washington* (23, 1, p. 10) Article based on AIAA Paper 84-1797

A86-003 Rarefied-Flow Aerodynamics and Thermosphere Structure from Shuttle Flight Measurements. Robert C. Blanchard and Gregory M. Buck, *NASA Langley Research Center* (23, 1, p. 18) Article based on AIAA Paper 85-0347

A86-004 Cryogenic and Thermal Design for the Space Infrared Telescope Facility (SIRTF). J. H. Lee and W. F. Brooks, *NASA Ames Research Center* (23, 1, p. 25) Article based on AIAA Paper 84-1776

A86-005 Magnus Effects on Spinning Transonic Finned Missiles. Arnan Seginer, *Technion--Israel Institute of Technology*; and Izhak Rosenwasser, *Israel Aircraft Industries* (23, 1, p. 31) Article based on AIAA Paper 83-2146 CP836

A86-006 Three-Dimensional Refraction/Diffraction of Electromagnetic Waves Through Rocket Exhaust Plumes. A. J. Senol and G. L. Romine, *Martin Marietta Corporation* (23, 1, p. 39) Article based on AIAA Paper 84-1967

A86-007 Hypersonic Finite-Rate Chemically Reacting Viscous Flows over an Ablating Carbon Surface. D. J. Song, *Virginia Polytechnic Institute and State University*; and Clark H. Lewis, *VRA, Inc.* (23, 1, p. 47) Article based on AIAA Paper 84-1731

A86-008 Performance Analysis of Scarfed Nozzles. Jay S. Lilley, *U. S. Army Missile Command, Redstone Arsenal*; and Joe D. Hoffman, *Purdue University* (23, 1, p. 55) Article based on AIAA Paper 84-1416

A86-009 Application of a Full Potential Method for Predicting Supersonic Flowfields and Aerodynamic Characteristics. Kenneth M. Jones, *NASA Langley Research Center* (23, 1, p. 63) Article based on AIAA Paper 83-1802

A86-010 Evaluation of Boundary-Layer and Parabolized Navier-Stokes Solutions for Re-Entry Vehicles. Mary McWhorter, Ralph W. Noack and William L. Oberkampff, *Sandia National Laboratories* (23, 1, p. 70) Article based on AIAA Paper 84-0486

A86-011 Tethers and Asteroids for Artificial Gravity Assist in the Solar System. Paul A. Penzo and Harris L. Mayer, *Jet Propulsion Laboratory, California Institute of Technology* (23, 1, p. 79) Article based on AIAA Paper 84-2056

A86-012 Re-Entry Module for a Shuttle-Derived Vehicle Launch System. J. R. Tewell and E. S. Ewing, *Martin Marietta Aerospace*; and D. E. Florence, *General Electric Space Division* (23, 1, p. 83) Article based on AIAA Paper 83-1797

A86-013 Dynamic Response and Collapse of Slender Guyed Booms for Space Application. J. M. Housner and W. K. Belvin, *NASA Langley Research Center* (23, 1, p. 88) Article based on AIAA Paper 83-0821 CP831

A86-014 Response of Inconel 617 to Sea Salt and Re-Entry Conditions. Ronald K. Clark, *NASA Langley Research Center*; and Jalaiah Unnam, *Analytical Services and Materials Inc.* (23, 1, p. 96) Article based on AIAA Paper 84-1768

A86-015 Dynamic Analysis of a Deployable Space Structure. G. E. Weeks, *The University of Alabama* (23, 1, p. 102) Article based on AIAA Paper 85-0593 CP851