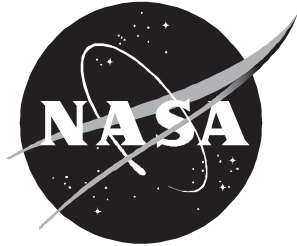


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NASA Langley Scientific and Technical Information Output—1999

*Susan H. Stewart and Harriet B. Machie, Compilers
Langley Research Center, Hampton, Virginia*

February 2000

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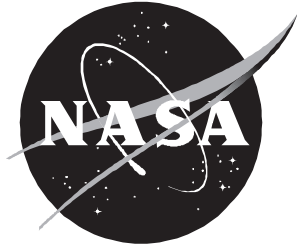
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National Aeronautics and
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Preface

This report contains a listing of the NASA Langley Research Center's publicly available scientific and technical research output for C.Y. 1999.

The intent of this report is to provide a greater awareness of the broad scope of results and the importance of the research and development work conducted by scientists and engineers at Langley. This current awareness is mandated by the National Aeronautics and Space Act of 1958, which provides for the widest practical dissemination of NASA research.

During C.Y. 1999, Langley's contributions to NASA and non-NASA literature included 3 Special Publications, 15 Technical Publications, 19 Conference Publications, 82 Technical Memorandums, 116 Contractor Reports, 187 Journal Articles and Book Publications, 554 Meeting Presentations, 43 Technical Talks, 11 Tech Briefs, and 28 Patents.

Introduction

The NASA Langley Research Center is one of the Nation's leading laboratories for research and development in the sciences of aeronautics and space technology. Langley conducts basic and applied research in the areas of aerospace systems, concepts, and analysis, aerodynamics, aerothermodynamics, and acoustics, structures and materials, airborne systems, atmospheric sciences, and systems engineering.

This document contains a bibliography of Langley's publicly available scientific and technical research output for 1999 which is processed through the Center's Office of the Chief Information Officer to become an integral part of NASA's Agency-wide Scientific and Technical Information (STI) system. The results of Langley's research are disseminated in a variety of NASA and non-NASA scientific and technical media and information systems. This document is intended to be a reference summary for researchers and a current awareness publication for the scientific, research, and academic community. Details of the availability of the research references in this document are found in the section, "Availability," on page vi.

Many Langley reports are available electronically on the Langley Technical Report Server (LTRS) at <http://techreports.larc.nasa.gov/ltrs/ltrs.html> or the Institute for Computer Applications in Science and Engineering (ICASE) Technical Report Server (ITRS) at <http://www.icas.edu/docs/library/itrs.html> via the World Wide Web (WWW). The relative Uniform Resource Locators are noted below citations for reports available electronically.

The citations are grouped by the Scientific and Technical Aerospace Reports (STAR) subject categories and listed alphabetically by author or innovator. The Langley organization to which the senior author or innovator is assigned and the Research and Technology Objectives and Plans (RTOP) number are noted below citations when appropriate and included in the indexes.

Patents listed are those which were issued in 1999 and owned by Langley Research Center.

Publication of some journal articles was not known at press time for the 1998 issue of this document. These articles are therefore listed in the 1999 issue.

Availability

<u>Category</u>	<u>Source</u>
NASA Reports	NASA Center for AeroSpace Information (CASI) 7121 Standard Drive Hanover, MD 21076-1320 (301) 621-0390 National Technical Information Service (NTIS) 5285 Port Royal Road Springfield, VA 22161-2171 (703) 605-6000
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Scientific and Technical Publications

Aeronautics

Category 01 Aeronautics (General)

- 1** Atkins, H. L.; and Lockard, D. P.: A High-Order Method Using Unstructured Grids for the Aeroacoustic Analysis of Realistic Aircraft Configurations. Presented at 5th AIAA/CEAS Aeroacoustics Conference, May 10-12, 1999, Bellevue, Washington. AIAA Paper No. 99-1945.
<http://techreports.larc.nasa.gov/ltrs/PDF/1999/aiaa/NASA-aiaa-99-1945.pdf>
Organization RB RTOP 538-03-11
- 2** Ege, R.; Brown, J.; Bradley, K. A.; and Grandi, F.: The Aviation System Analysis Capability Noise Impact Model. (NAS2-14361 Logistics Management Institute.) NASA/CR-1999-209356, July 1999, 120 p.
<http://techreports.larc.nasa.gov/ltrs/PDF/1999/cr/NASA-99-cr209356.pdf>
Organization OE RTOP 536-16-11
- 3** Ege, R.; Villani, J. A.; and Ritter, P.: Aviation System Analysis Capability Quick Response System Report for Fiscal Year 1998. (NAS2-14361 Logistics Management Institute.) NASA/CR-1999-208990, January 1999, 87 p.
<http://techreports.larc.nasa.gov/ltrs/PDF/1999/cr/NASA-99-cr208990.pdf>
Organization OE RTOP 538-16-11
- 4** Gaier, E. M.; Edlich, A.; Santmire, T. E.; and Wingrove, E. R., III: The Aviation System Analysis Capability Air Carrier Cost-Benefit Model. (NAS2-14361 Logistics Management Institute.) NASA/CR-1999-208983, January 1999, 55 p.
<http://techreports.larc.nasa.gov/ltrs/PDF/1999/cr/NASA-99-cr208983.pdf>
Organization OE RTOP 538-16-11
- 5** Hassan, A. A.: Predicted Aerodynamic Characteristics of a NASA-0015 Airfoil Having a 25% Integral-Type Trailing Edge Flap. (NAS1-20096 The Boeing Company.) NASA/CR-1999-209328, May 1999, 167 p.
Organization RB RTOP 538-07-14
- 6** Hemm, R. V.; Shapiro, G.; Lee, D. A.; Gribko, J.; and Glaser, B.: Benefit Estimates of Terminal Area Productivity Program Technologies. (NAS2-14361 Logistics Management Institute.) NASA/CR-1999-208989, January 1999, 144 p.
<http://techreports.larc.nasa.gov/ltrs/PDF/1999/cr/NASA-99-cr208989.pdf>
Organization OE RTOP 538-16-11
- 7** Hu, H.: Study of the TRAC Airfoil Table Computational System. (NAS1-19935 Hampton University.) NASA/CR-1999-209323, May 1999, 46 p.
Organization RB RTOP 538-07-14

- 8** Johnson, J. P.; and Santmire, T. E.: Aviation System Analysis Capability Air Carrier Investment Model—Cargo. (NAS2-14361 Logistics Management Institute.) NASA/CR-1999-208984, January 1999, 41 p.
<http://techreports.larc.nasa.gov/ltrs/PDF/1999/cr/NASA-99-cr208984.pdf>
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- 9** Kostiuk, P. F.; Shapiro, G.; Hanson, D.; Kolitz, S.; Leong, F.; Rosch, G.; Coumeri, M.; Scheidler, P., Jr.; and Bonesteel, C.: A System for Integrated Reliability and Safety Analyses. (NAS2-14361 Logistics Management Institute.) NASA/CR-1999-209548, August 1999, 82 p.
<http://techreports.larc.nasa.gov/ltrs/PDF/1999/cr/NASA-99-cr209548.pdf>
Organization OE RTOP 536-16-11
- 10** Lachowicz, J. T.; Yao, C-S.; and Joslin, R. D.: Physical Analysis and Scaling of a Jet and Vortex Actuator. Presented at 3rd Joint ASME/JSME Fluids Engineering Conference, July 18-22, 1999, San Francisco, California. In Proceedings.
<http://techreports.larc.nasa.gov/ltrs/PDF/1999/mtg/NASA-99-3fec-jtl.pdf>
Organization RB RTOP 522-32-31
- 11** Lockard, D. P.; and Atkins, H. L.: Efficient Implementations of the Quadrature-Free Discontinuous Galerkin Method. Presented at 14th AIAA Computational Fluid Dynamics Conference, June 28–July 1, 1999, Norfolk, Virginia. AIAA Paper No. 99-3309.
<http://techreports.larc.nasa.gov/ltrs/PDF/1999/aiaa/NASA-aiaa-99-3309.pdf>
Organization RB RTOP 538-03-13
- 12** Long, D.; Lee, D. A.; Gaier, E. M.; Johnson, J. P.; and Kostiuk, P. F.: A Method for Forecasting the Commercial Air Traffic Schedule in the Future. (NAS2-14361 Logistics Management Institute.) NASA/CR-1999-208987, January 1999, 84 p.
<http://techreports.larc.nasa.gov/ltrs/PDF/1999/cr/NASA-99-cr208987.pdf>
Organization OE RTOP 538-16-11
- 13** Long, D.; Lee, D. A.; Johnson, J. P.; Gaier, E. M.; and Kostiuk, P. F.: Modeling Air Traffic Management Technologies With a Queuing Network Model of the National Airspace System. (NAS2-14361 Logistics Management Institute.) NASA/CR-1999-208988, January 1999, 121 p.
<http://techreports.larc.nasa.gov/ltrs/PDF/1999/cr/NASA-99-cr208988.pdf>
Organization OE RTOP 538-16-11
- 14** Moster, G. E.; and Martin, J. G.: Oscillatory Trajectories Applied to NASA's DF-7 Configuration. Presented at AIAA 9th International Space Planes and Hypersonic Systems and Technologies Conference, November 1-5, 1999, Norfolk, Virginia. AIAA Paper No. 99-4931.
<http://techreports.larc.nasa.gov/ltrs/PDF/1999/aiaa/NASA-aiaa-99-4931.pdf>
Organization OC RTOP 522-51-71

- 15** Roberts, E.; and Kostiuik, P. F.: Aviation System Analysis Capability Executive Assistant Analyses. (NAS2-14361 Logistics Management Institute.) NASA/CR-1999-209118, March 1999, 42 p.
<http://techreports.larc.nasa.gov/ltrs/PDF/1999/cr/NASA-99-cr209118.pdf>
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- 16** Roberts, E.; Villani, J. A.; Anderson, K.; and Book, P.: Aviation System Analysis Capability Executive Assistant Development. (NAS2-14361 Logistics Management Institute.) NASA/CR-1999-209119, March 1999, 160 p.
<http://techreports.larc.nasa.gov/ltrs/PDF/1999/cr/NASA-99-cr209119.pdf>
 Organization OE RTOP 536-16-11

Category 02 Aerodynamics

- 17** Anders, J. B., Jr.; Anderson, W. K.; and Murthy, A. V.: Transonic Similarity Theory Applied to a Supercritical Airfoil in Heavy Gas. *Journal of Aircraft*, Volume 36, No. 6, November–December 1999, p. 957-964.
 Organization RB RTOP 505-59-53
- 18** Anders, S. G.; and Fischer, M. C.: F-16XL-2 Supersonic Laminar Flow Control Flight Test Experiment. NASA/TP-1999-209683, December 1999, 262 p.
 Organization RB RTOP 537-07-23
- 19** Asbury, S. C.; and Hunter, C. A.: Effects of Convoluted Divergent Flap Contouring on the Performance of a Fixed-Geometry Nonaxisymmetric Exhaust Nozzle. NASA/TP-1999-209093, February 1999, 75 p.
<http://techreports.larc.nasa.gov/ltrs/PDF/1999/tp/NASA-99-tp209093.pdf>
 Organization RB RTOP 538-14-12
- 20** Asbury, S. C.; and Hunter, C. A.: Static Performance of a Fixed-Geometry Exhaust Nozzle Incorporating Porous Cavities for Shock-Boundary Layer Interaction Control. NASA/TM-1999-209513, August 1999, 139 p.
<http://techreports.larc.nasa.gov/ltrs/PDF/1999/tm/NASA-99-tm209513.pdf>
 Organization RD RTOP 538-11-11
- 21** Baggag, A.; Atkins, H. L.; Ozturan, C.; and Keyes, D. E.: Parallelization of an Object-Oriented Unstructured Aeroacoustics Solver. Presented at Ninth SIAM Conference on Parallel Processing for Scientific Computing, March 22-24, 1999, San Antonio, Texas.
 Organization RB RTOP 522-31-61
- 22** Banks, D. W.; Wood, R. M.; and Bauer, S. X.: Control and Augmentation of Passive Porosity Through Transpiration Control. U. S. Patent 5,901,929. Issued May 11, 1999.
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- 23** Bennett, R. M.; and Walker, C. E.: Computational Test Cases for a Rectangular Supercritical Wing Undergoing Pitching Oscillations. NASA/TM-1999-209130, April 1999, 132 p.
<http://techreports.larc.nasa.gov/ltrs/PDF/1999/tm/NASA-99-tm209130.pdf>
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- 24** Bennett, R. M.; and Walker, C. E.: Computational Test Cases for a Clipped Delta Wing With Pitching and Trailing-Edge Control Surface Oscillations. NASA/TM-1999-209104, March 1999, 92 p.
<http://techreports.larc.nasa.gov/ltrs/PDF/1999/tm/NASA-99-tm209104.pdf>
 Organization RC RTOP 522-31-81
- 25** Boeing Commercial Airplane Group: High Reynolds Number Hybrid Laminar Flow Control (HLFC) Flight Experiment: III. Leading Edge Design, Fabrication, and Installation. (NAS1-18574 Boeing Commercial Airplane Group.) NASA/CR-1999-209325, April 1999, 94 p.
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- 26** Boeing Commercial Airplane Group: High Reynolds Number Hybrid Laminar Flow Control (HLFC) Flight Experiment: IV. Suction System Design and Manufacture. (NAS1-18574 Boeing Commercial Airplane Group.) NASA/CR-1999-209326, April 1999, 105 p.
 Organization RB RTOP 522-32-31
- 27** Boeing Commercial Airplane Group: High Reynolds Number Hybrid Laminar Flow Control (HLFC) Flight Experiment: II. Aerodynamic Design. (NAS1-18574 Boeing Commercial Airplane Group.) NASA/CR-1999-209324, April 1999, 172 p.
 Organization RB RTOP 522-32-31
- 28** Brauckmann, G. J.: X-34 Vehicle Aerodynamic Characteristics. *Journal of Spacecraft and Rockets*, Volume 36, No. 2, March–April 1999, p. 229-239.
 Organization RB RTOP 242-80-01
- 29** Britt, C. L.; Nguyen, D. C.; and Koch, G. J.: Pulsed Lidar Measurements of Aircraft Wake Vortices at DFW and JFK. Presented at 37th AIAA Aerospace Sciences Meeting and Exhibit, January 11-14, 1999, Reno, Nevada. AIAA Paper No. 99-0982.
 Organization RF RTOP 538-04-11
- 30** Carpenter, M. H.; Nordstrom, J.; and Gottlieb, D. I.: A Stable and Conservative Interface Treatment of Arbitrary Spatial Accuracy. *Journal of Computational Physics*, Volume 148, No. 2, 1999, p. 341-365.
 Organization RB RTOP 522-31-61
- 31** Chapman, G. T.; Berner, C.; Winchenbach, G. L.; and Mitcheltree, R. A.: The Use of Spherical Bases to Eliminate Limit Cycles of Blunt Entry Vehicles. Presented at 37th AIAA Aerospace Sciences Meeting and Exhibit, January 11-14, 1999, Reno, Nevada. AIAA Paper No. 99-1023.
 Organization RB RTOP 242-80-01

- 32** Chapman, G. T.; Mitcheltree, R. A.; and Hathaway, W.: Transonic and Low Supersonic Static and Dynamic Aerodynamic Characteristics of the Stardust Sample Return Capsule. Presented at 37th AIAA Aerospace Sciences Meeting and Exhibit, January 11-14, 1999, Reno, Nevada. AIAA Paper No. 99-1021.
Organization RB RTOP 242-80-01
- 33** Cole, D.; Glauser, M. N.; Yao, C-S.; and Paschal, K. B.: Including Time Dependency in Particle Image Velocimetry Measurements Using Linear Stochastic Estimation. Presented at 30th AIAA Fluid Dynamics Conference, June 28–July 1, 1999, Norfolk, Virginia. AIAA Paper No. 99-3595.
Organization RB RTOP 522-32-31
- 34** Deere, K. A.; and Asbury, S. C.: Experimental and Computational Investigation of a Translating-Throat, Single-Expansion-Ramp Nozzle. NASA/TP-1999-209138, May 1999, 51 p.
<http://techreports.larc.nasa.gov/ltrs/PDF/1999/tp/NASA-99-tp209138.pdf>
Organization RB RTOP 522-21-51
- 35** Deere, K. A.; and Hunter, C. A.: Experimental Investigation of Convolved Contouring for Aircraft Afterbody Drag Reduction. Presented at 35th AIAA/ASME/SAE/ASEE Joint Propulsion Conference and Exhibit, June 20-24, 1999, Los Angeles, California. AIAA Paper No. 99-2670.
<http://techreports.larc.nasa.gov/ltrs/PDF/1999/aiaa/NASA-aiaa-99-2670.pdf>
Organization RB RTOP 522-21-51
- 36** Duquesne, N.; Carlson, J. R.; Rumsey, C. L.; and Gatski, T. B.: Computation of Turbulent Wake Flows in Variable Pressure Gradient. Presented at 30th AIAA Fluid Dynamics Conference, June 28–July 1, 1999, Norfolk, Virginia. AIAA Paper No. 99-3781.
<http://techreports.larc.nasa.gov/ltrs/PDF/1999/aiaa/NASA-aiaa-99-3781.pdf>
Organization RB RTOP 538-14-14
- 37** Engelund, W. C.; Holland, S. D.; Cockrell, C. E., Jr.; and Bittner, R. D.: Propulsion System Airframe Integration Issues and Aerodynamic Database Development for the Hyper-X Flight Research Vehicle. Presented at 14th International Symposium on Airbreathing Engines, September 5-10, 1999, Florence, Italy. In Proceedings, ISOABE Paper No. 99-7215.
<http://techreports.larc.nasa.gov/ltrs/PDF/1999/mtg/NASA-99-14isoabe-wce.pdf>
Organization RA RTOP 522-51-71
- 38** Garriz, J. A.; Newman, P. A.; Vatsa, V. N.; and Haigler, K. J.: Observations on Three-Dimensional Nonlinear Transonic Wall-Interference Assessment and Correction Using Semispan Wing Data. *Journal of Computers and Fluids*, Volume 28, No. 4/5, 1999, p. 629-651.
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- 39** Ghaffari, F.: Unstructured Grid Viscous Flow Simulation Over High-Speed Research Technology Concept Airplane at High-Lift Conditions. NASA/TP-1999-209718, November 1999, 32 p.
<http://techreports.larc.nasa.gov/ltrs/PDF/1999/tp/NASA-99-tp209718.pdf>
Organization RB RTOP 537-07-51
- 40** Graves, S. S.: Investigation of a Technique for Measuring Dynamic Ground Effect in a Subsonic Wind Tunnel. (NCC1-24 George Washington University, JIAFS.) NASA/CR-1999-209544, August 1999, 66 p.
<http://techreports.larc.nasa.gov/ltrs/PDF/1999/cr/NASA-99-cr209544.pdf>
Organization RB RTOP 537-07-51
- 41** Gumbert, C. R.; Hou, G. J.; and Newman, P. A.: Simultaneous Aerodynamic Analysis and Design Optimization (SAADO) for a 3-D Rigid Wing. Presented at 14th AIAA Computational Fluid Dynamics Conference, June 28–July 1, 1999, Norfolk, Virginia. AIAA Paper No. 99-3296.
<http://techreports.larc.nasa.gov/ltrs/PDF/1999/aiaa/NASA-aiaa-99-3296.pdf>
Organization RB RTOP 522-31-81
- 42** Hahne, D. E.: 1999 NASA High-Speed Research Program Aerodynamic Performance Workshop: Volume I—Configuration Aerodynamics. NASA/CP-1999-209704/VOL1/PT2, December 1999, 775 p.
Organization RD RTOP 537-07-51
- 43** Hahne, D. E.: 1999 NASA High-Speed Research Program Aerodynamic Performance Workshop: Volume II—High Lift. NASA/CP-1999-209704/VOL2/PT1, December 1999, 556 p.
Organization RD RTOP 537-07-51
- 44** Hahne, D. E.: 1999 NASA High-Speed Research Program Aerodynamic Performance Workshop: Volume I—Configuration Aerodynamics. NASA/CP-1999-209704/VOL1/PT1, December 1999, 865 p.
Organization RD RTOP 537-07-51
- 45** Hahne, D. E.: 1999 NASA High-Speed Research Program Aerodynamic Performance Workshop: Volume II—High Lift. NASA/CP-1999-209704/VOL2/PT2, December 1999, 485 p.
Organization RD RTOP 537-07-51
- 46** Hepner, T. E.: Aerodynamic Flow Field Measurements for Automotive Systems. NASA/TM-1999-208965, January 1999, 188 p.
Organization RB RTOP 522-31-61

- 47** Hollis, B. R.; Thompson, R. A.; Murphy, K. J.; Nowak, R. J.; Riley, C. J.; Wood, W. A.; Alter, S. J.; and Prabhu, R. K.: X-33 Aerodynamic and Aeroheating Computations for Wind Tunnel and Flight Conditions. Presented at AIAA Atmospheric Flight Mechanics Conference, August 9-11, 1999, Portland, Oregon. AIAA Paper No. 99-4163.
<http://techreports.larc.nasa.gov/ltrs/PDF/1999/aiaa/NASA-aiaa-99-4163.pdf>
Organization RB RTOP 242-80-01
- 48** Hunter, C. A.; and Deere, K. A.: Computational Investigation of Fluidic Counterflow Thrust Vectoring. Presented at 35th AIAA/ASME/SAE/ASEE Joint Propulsion Conference and Exhibit, June 20-24, 1999, Los Angeles, California. AIAA Paper No. 99-2669.
<http://techreports.larc.nasa.gov/ltrs/PDF/1999/aiaa/NASA-aiaa-99-2669.pdf>
Organization RB RTOP 322-21-51
- 49** Joslin, R. D.: Aircraft Laminar Flow Control. In *McGraw-Hill Yearbook of Science and Technology 2000*, The McGraw-Hill Companies, 1999, p. 5-7.
Organization RB RTOP 522-32-31
- 50** Joslin, R. D.: Toward Time-Accurate CFD for Active Control Flow. Presented at 1999 World Aviation Congress and Exposition, October 19-21, 1999, San Francisco, California.
Organization RB RTOP 522-32-31
- 51** Joslin, R. D.; Horta, L. G.; and Chen, F.-J.: Transitioning Active Flow Control to Applications. Presented at 30th AIAA Fluid Dynamics Conference, June 28–July 1, 1999, Norfolk, Virginia. AIAA Paper No. 99-3575.
<http://techreports.larc.nasa.gov/ltrs/PDF/1999/aiaa/NASA-aiaa-99-3575.pdf>
Organization RB RTOP 522-32-31
- 52** Malmuth, N. D.; Crites, R. C.; Everhart, J. L.; Newman, P. A.; and Sickles, W. L.: Transonic Wind Tunnel Wall Interference. In *AGARDograph 336 Wind Tunnel Wall Corrections*, AGARD-AG-336, Chapter 5, B. F. Ewald, ed., AGARD, October 1998, p. 5-1–5-98.
Organization RB RTOP 519-20-21
- 53** Mavriplis, D. J.; and Pirzadeh, S. Z.: Large-Scale Parallel Unstructured Mesh Computations for 3D High-Lift Analysis. Presented at 37th AIAA Aerospace Sciences Meeting and Exhibit, January 11-14, 1999, Reno, Nevada. AIAA Paper No. 99-0537.
<http://techreports.larc.nasa.gov/ltrs/PDF/1999/aiaa/NASA-aiaa-99-0537.pdf>
Organization RB RTOP 522-22-31
- 54** McGrath, B. E.; and Wood, R. M.: Serrated-Planform Lifting-Surfaces. U. S. Patent 5,901,925. Issued May 11, 1999.
Organization RB

- 55** Mineck, R. E.: Application of an Unstructured Grid Navier-Stokes Solver to a Generic Helicopter Body—Comparison of Unstructured Grid Results With Structured Grid Results and Experimental Results. NASA/TM-1999-209510, August 1999, 52 p.
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Appendix

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The publications listed in this appendix were publicly released in 1999.

- 1** Baize, D. G. (Editor): 1997 NASA High-Speed Research Program Aerodynamic Performance Workshop, Volume I—Configuration Aerodynamics. NASA/CP-1999-209691/VOL1/PT1, December 1999, 804 p.
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- 2** Baize, D. G. (Editor): 1997 NASA High-Speed Research Program Aerodynamic Performance Workshop, Volume I—Configuration Aerodynamics. NASA/CP-1999-209691/VOL1/PT2, December 1999, 956 p.
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Subject Category 02
- 4** Baize, D. G. (Compiler): 1995 NASA High-Speed Research Program Sonic Boom Workshop—Volume II—Configuration Design, Analysis, and Testing. NASA/CP-1999-209520, December 1999, 187 p.
Subject Category 01
- 5** Banks, D. W.; Gile-Laffin, B. E.; Kemmerly, G. T.; and Campbell, B. A.: Low-Speed Investigation of Upper-Surface Leading-Edge Blowing on a High-Speed Civil Transport Configuration. NASA/TP-1999-209538, December 1999, 62 p.
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- 23** Lessard, W. B.: Navier-Stokes Simulation of Several High-Lift Reference H Configurations. NASA/TP-1999-209541, December 1999, 94 p.
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- 24** Londenberg, W. K.: Computational Assessment of Aft-Body Closure for the HSR Reference H Configuration. (NAS1-19672 ViGYAN, Inc.) NASA/CR-1999-209521, December 1999, 42 p.
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- 29** McMillin, S. N. (Editor): 1998 NASA High-Speed Research Program Aerodynamic Performance Workshop, Volume I—Configuration Aerodynamics. NASA/CP-1999-209692/VOL1/PT2, December 1999, 953 p.
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- 36** Riley, D. R.; Glaab, L. J.; Brandon, J. M.; Person, L. H., Jr.; and Glaab, P. C.: Piloted Simulation Study of a Dual Thrust-Cutback Procedure for Reducing High-Speed Civil Transport Takeoff Noise Levels. NASA/TP-1999-209698, December 1999, 72 p.
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- 41** Wood, R. M. (Editor): First NASA/Industry High Speed Research Configuration Aerodynamics Workshop. NASA/CP-1999-209690/PT1, December 1999, 349 p.
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