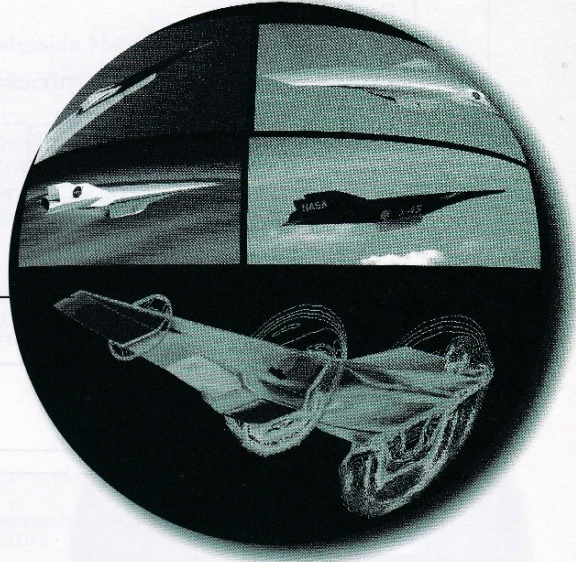


**9TH**  
INTERNATIONAL  
Space Planes and  
Hypersonic Systems  
and Technologies  
Conference

**3RD**  
Weakly Ionized Gases  
Workshop



1-5 NOVEMBER 1999

NORFOLK WATERSIDE MARRIOTT

NORFOLK, VIRGINIA, USA

**Final Program**

AMERICAN INSTITUTE OF AERONAUTICS AND ASTRONAUTICS



**Monday Morning / 1 November 1999**

0830	0900	0930	1000	1030	1100	1130	1200
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**Session 1-HYTASP-1 Plenary**

Chaired by: R. CULPEPPER, Accurate Automation Corp., Chattanooga, TN

**Marriott IV**

0630—Introduction, Richard Culppepper, Technical Program Co-Chair

**Remarks**

- Dr. Vladimir Sosunov, Central Institute of Aviation Motors, Russia
- Dr. Hirotochi Kubota, University of Tokyo
- Dr. Ernst Hirschel, DaimlerChrysler Aerospace AG
- Dr. Kenneth Harwell, U.S. Air Force Research Lab
- 0900—Russian "ORYOL" Program—An Overview, Nikolai Avilimov, Central Research Institute of Machine Building, Russia
- 0930—Spaceplane and Reusable Launch Vehicle Program in Japan, Dr. Masataka Matsu, National Aerospace Laboratory, Japan
- 1000—Break
- 1030—The Major Results and Conclusion of ESA's FESTIP System Study, Heribert Kutzera, DaimlerChrysler Aerospace AG, and Claude Johnson, CNES, France
- 1100—Weakly Ionized Gas Overview, Lee Bain, U.S. Air Force Research Laboratory
- 1130—U.S. Air Force Hypersonics Program, Robert Mercier, U.S. Air Force Research Laboratory

**Monday Afternoon / 1 November 1999**

1400	1430	1500	1530	1600	1630	1700	1730
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**Session 2-HYTASP-2 Systems and Vehicles Concepts 1**

Chaired by: N. ANFIMOV, Central Research Inst. of Machine-Building (TsNIIMash), Korolev, Moscow Region, Russia, and R. PEGG, NASA Langley, Hampton, VA

**Marriott I-III**

AIAA-99-4800  
MHD Power Extraction from Cold Hypersonic Air Flow with External Flow  
S. Machireti, M. Shneider, and P. Miles, Princeton Univ., Princeton, NJ

AIAA-99-4801  
Flight Performance of an ARCC Engine Thrusted Spaceplane  
T. Yamazaki and A. Yamazaki, National Univ. of Yokohama, Yokohama, Japan, M. Matsuura, and T. Mori, National Aerospace Lab, Tokyo, Japan

AIAA-99-4802  
Hypersonic Airplane Space Tether Orbital Launch System  
R. Forward, Teathers Aerospace, Inc., Falls Church, VA; T. Wright, Teathers Aerospace, Inc., Falls Church, VA; M. T. Wright, Teathers Aerospace, Inc., Falls Church, VA; M. T. Wright, Teathers Aerospace, Inc., Falls Church, VA; M. T. Wright, Teathers Aerospace, Inc., Falls Church, VA

AIAA-99-4803  
From LEO to the Planets Using Waveguides  
A. McDonald and J. Pasadara, JPL Propulsion Lab, Pasadena, CA; W. J. Lewis, JPL Propulsion Lab, Pasadena, CA; M. J. Langowski and E. Borjigo, Purdue Univ., West Lafayette, IN

AIAA-99-4804  
Comments on an MHD Energy Bypass Engine Powered Spaceplane  
R. Chase, ANSER, Arlington, VA, USA; U. Schmitt, NASA Ames, Moffett Field, CA

AIAA-99-4805  
Concept Study on Winged Vehicle  
H. Taniguchi, National Space Development Agency of Japan, Tokyo, Japan

**Session 3-HYTASP-3**

Chaired by: H. NORSTRUD, Norwegian Univ. of Science and Technology, Trondheim, Norway, and K. HARWELL, Air Force Research Lab, Wright-Patterson AFB, OH

**CFD I—Vehicles**

**Marriott V-VII**

AIAA-99-4806  
Integrating Aerothermodynamic and TPS into Conceptual RLV Design  
C. Cover and J. Oles, General Electric, Columbus, OH

AIAA-99-4807  
Computational Simulation of Hypersonic Vehicle Separation from Its Booster  
J. Liu and O. Bayazit, Old Dominion Univ., Norfolk, VA

AIAA-99-4808  
A Collaborative Analysis Tool for Integrating Hypersonic Aerodynamics, Thermal Protection Systems and RBCC Engine Launch Vehicle  
T. Stanley, International Space Systems, Inc., Huntsville, AL; R. Alexandere, NASA Marshall, Huntsville, AL

AIAA-99-4809  
Concept Study on Winged Vehicle  
H. Taniguchi, National Space Development Agency of Japan, Tokyo, Japan

AIAA-99-4810  
Concept Study on Winged Vehicle  
H. Taniguchi, National Space Development Agency of Japan, Tokyo, Japan