

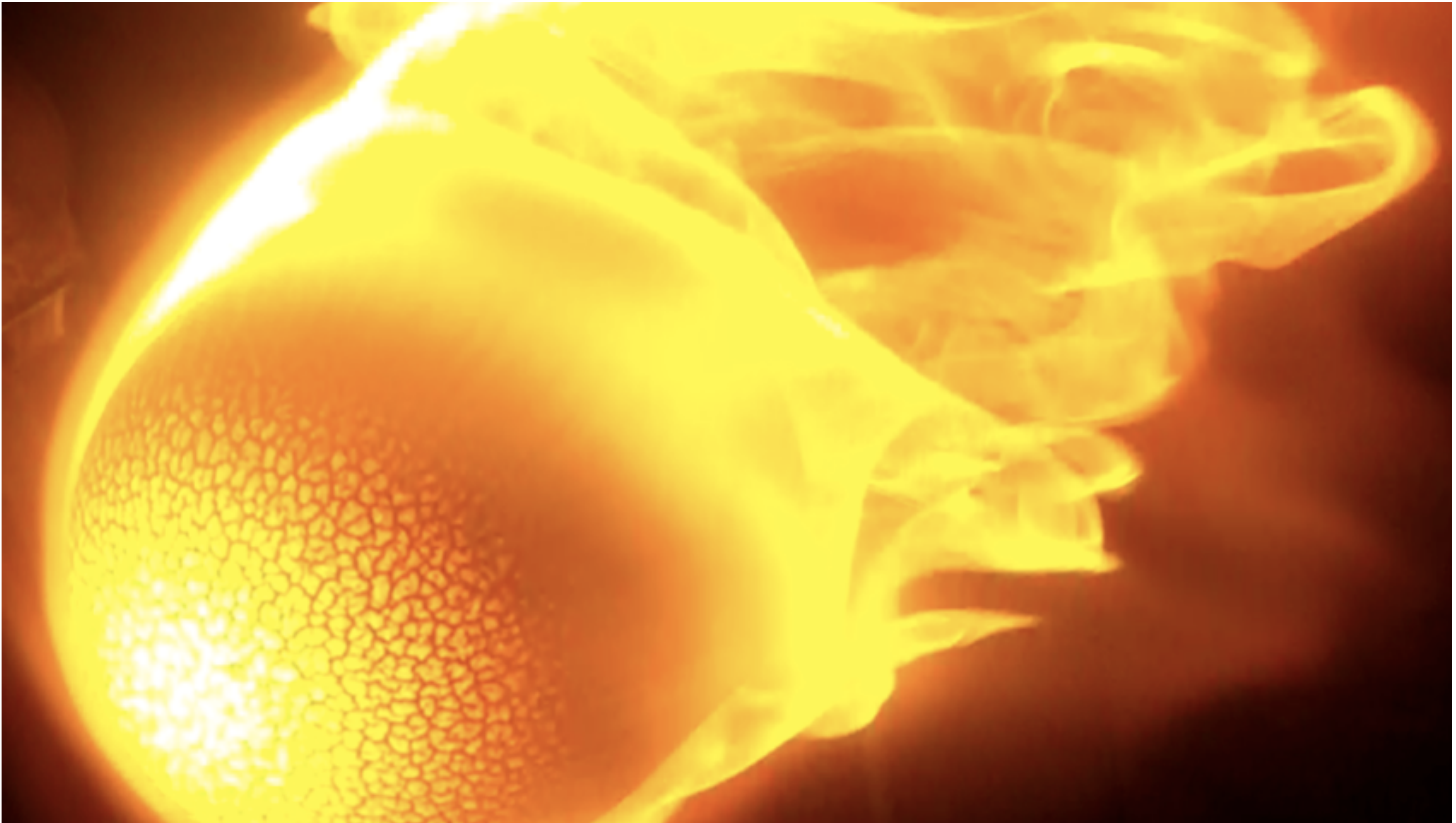
6th Ablation Workshop

April 10-11th 2014

I Hotel and Illinois Conference Center
1900 S. First Street, Champaign, IL 61820

<http://ablation2014.engineering.uky.edu>

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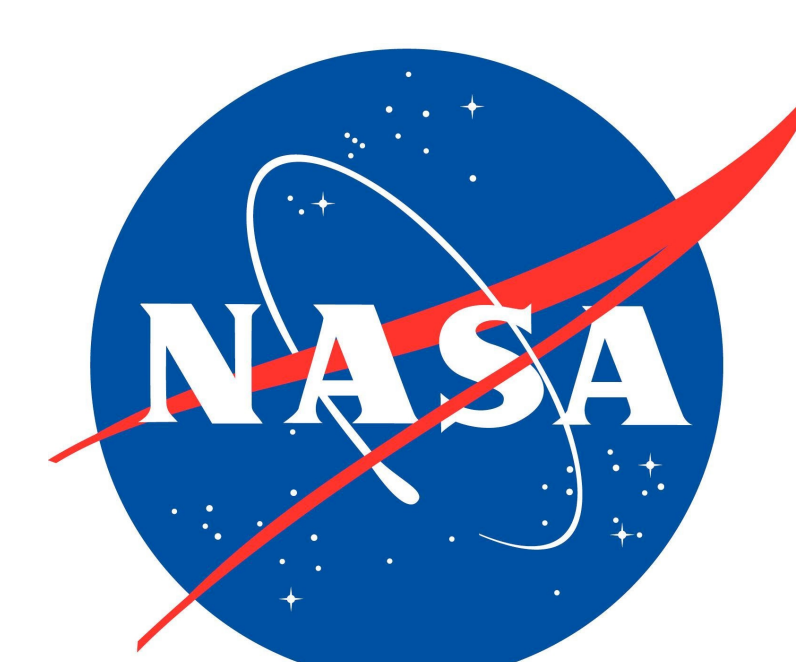
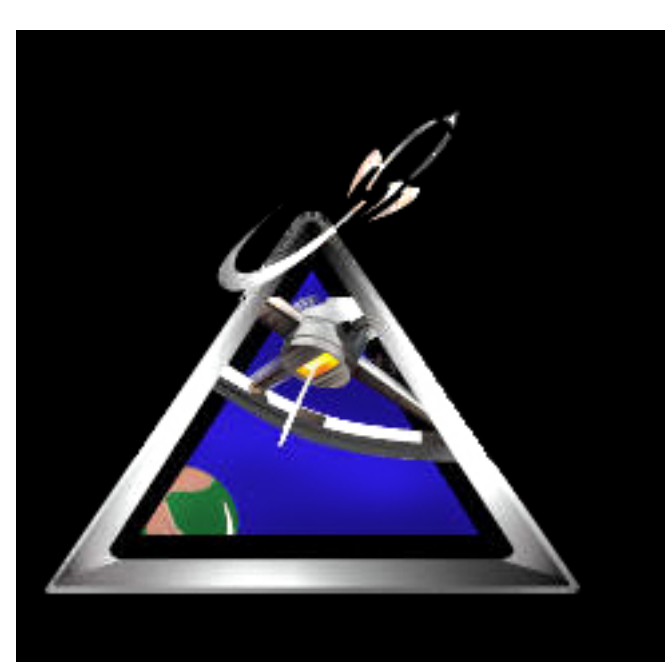


Steering Organizations



Agenda

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Agenda

Thursday April 10, 2014 -- Lincoln Room

Introduction/Overview

Chair: Alexandre Martin University of Kentucky, USA

8:00 Registration and Coffee

9:00 Introduction

Alexandre Martin, University of Kentucky, USA

Ioana Cozmuta, NASA Space Portal, USA

9:10 Ablation Research: NASA

Michael Wright, NASA Ames, USA

9:35 Ablation Research: AFOSR

John Schmisser, AFOSR, USA

10:00 Ablation Research: Sandia National Laboratories

David Kuntz, Sandia National Lab., USA

10:25 Coffee Break and Poster Session

New Developments in Ablation Science - Modeling

Chair: Marco Panesi University of Illinois, USA

10:45 ABLAMOD: Advanced Ablation Characterization and Modelling European project description

Gregory Pinaud, Airbus Defense and Space, France

11:10 Ablator Response Model Development & Challenges

Nagi N. Mansour, NASA Ames, USA

11:35 Surface effects and phenomena on ablative materials

Alexandre Martin, University of Kentucky, USA

12:00 Lunch

13:30 Investigation of Surface Radiation in Earth Re-entry Flows with Graphite Ablation

Christopher Alba, Air Force Institute of Technology, USA

13:55 Uncertainty Analysis of Carbon Ablation in the VKI Plasmatron

Alessandro Turchi, von Karman Institute of Fluid Dynamics, Belgium

14:20 Material response characterization of new-class ablators in view of numerical model calibration

Bernd Helber, von Karman Institute of Fluid Dynamics, Belgium

14:45 Microscale Modeling of Ablative Thermal Protection System Materials

Eric Stern, University of Minnesota, USA

15:10 Development of Modeling Capabilities for Decomposing Ablators

Roy Hogan, Sandia NL, USA

15:35 Coffee Break and Poster Session

Ablation Test-cases

Chair: Ioana Cozmuta, NASA Ames, USA

15:55 Overview of ablation test-cases

Alexandre Martin, University of Kentucky, USA

16:20 Questions and discussions

16:35 Ablation test case series #3

Tom van Eekelen, LMS-SAMTECH, Belgium

17:00 Group discussion - Modeling test-case

17:20 Group discussion - Material test-case

17:40 Group discussion - Flight data

18:00 Adjourn

19:00 Workshop dinner at Houlihan's

Agenda

Friday April 11, 2014 -- Lincoln Room

New Developments in Ablation Science - Materials

Chair: Majid Keyhani, U. of Tennessee, USA

8:00 Registration and Coffee

9:00 A light-weight ablative material for research purposes
Thomas Rothermel, DLR, Germany

9:25 In-Situ Recession Measurements by Photogrammetric Ablator Surface Analysis
Stefan Löhle (Megan McDonald), University of Stuttgart, Germany

9:50 TOUGH CERAM® High Temperature Structural & Ablation Composite
Max Sardou, SARDOU SA, France

10:15 Coffee Break and Poster Session

New Developments in Ablation Science - Experiments

Chair: Mark Ewing, ATK, USA

10:30 Remote Recession Sensing of Ablative Heat Shield Materials
Michael Winter, University of Kentucky, USA

10:55 Measurements of Ablation Species in an Air Plasma/ASTERM Ablating Boundary Layer
Megan MacDonald, École Centrale Paris, France

11:20 Experimental determination of pyrolysis products from carbon/resin ablative materials
Hsi-Wu Wong, Aerodyne Research, USA

11:45 Characterization of the Flow Field Over an Ablative Surface
Michael Allard, University of New Hampshire, USA

12:10 Adjourn

Posters

Development of a hypersonic thermo-chemical non-equilibrium flow solver
Huaibao Zhang, University of Kentucky, USA

Multi-dimensional Modeling of Pyrolysis Gas Transport in Charring Ablative Materials
Haoyue Weng, University of Kentucky, USA

Numerical Simulation of a Spalled Particle Trajectory in an Arc-Jet Environment
Raghava Davuluri, University of Kentucky, USA

A light-weight ablative material for research purposes
Thomas Rothermel, DLR, Germany

Oxidation of carbon-based porous materials
Jose Grana-Otero, University of Kentucky, USA

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