



March 5-8, 2007
The Cloyd Heck Marvin Center
Washington, DC

Monday, March 5, 2007:

7:45 Registration & Continental Breakfast

8:30 Intro & Welcome
Bill Ailor, The Aerospace Corporation

8:40 Keynote: Simon P. "Pete" Worden, Director, NASA Ames Research Center

SESSION 1A: Discovery & Characterization

Chair: David Morrison, NASA Ames Research Center

9:05 Poster Papers

9:15 Current NASA Discovery/Characterization Efforts: The Recommendations of the 2003 SDT report and the Dec. 2005 Congressional request
Donald Yeomans, NASA Jet Propulsion Laboratory

9:45 Dec. 2006 Report to Congress on the Next Generation of Search and Characterization
Lindley Johnson, NASA Headquarters

10:15 Break

10:30 Evaluation of Present and Future Ground-Based Surveys and Implications of a Large Increase in NEA Discovery Rate
Alan Harris, Space Science Institute

11:00 NEO Warning Times for NEAs and Comets
Paul Chodas, NASA Jet Propulsion Laboratory

11:30 NEO Alert Frequency, the Evolution of Impact Probabilities and Keyhole Dynamics
Steven Chesley, NASA Jet Propulsion Laboratory

12:00 Lunch

SESSION 1B: Discovery & Characterization

Chair: Donald Yeomans, NASA Jet Propulsion Laboratory

1:30 Radar Characterization of NEAs
Steve Ostro, NASA Jet Propulsion Laboratory

2:00 Results of the Hayabusa Mission to NEA Itokawa
Makoto Yoshikawa, Japan Aerospace Exploration Agency



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Monday, March 5, 2007 (cont.):

- 2:30 To What Extent Can NEAs be Grouped by Their Common Physical Characteristics?
Richard Binzel, Massachusetts Institute of Technology
- 3:00 Break
- 3:15 Internal Structures of NEOs
Erik Asphaug, University of California at Santa Cruz
- 3:45 NEA Characterization Missions
David Morrison, NASA Ames Research Center
- 4:15 Discussion
- 5:00 Reception on-site

Tuesday, March 6, 2007:

- 7:45 Registration & Continental Breakfast
- 8:30 Intro & Welcome
Bill Ailor, The Aerospace Corporation
- 8:40 Keynote: Michael Simpson, President, International Space University

SESSION 2: Deflection Techniques

Chair: Dave Lynch, The Aerospace Corporation

- 9:00 Poster Papers
- 9:15 Gravity Tractor
Ed Lu, B612 Foundation
- 9:45 Nuclear Deflection
Steve Patenaud, Lawrence Livermore National Laboratory
- 10:15 Break
- 10:30 Impact Deflection of Potentially Hazardous Asteroids Using Current Launch Vehicles
Jesse Koenig, SpaceDev Inc.
- 11:00 Response of NEO to Mitigation Techniques
Keith Holsapple, University of Washington



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Tuesday, March 6, 2007 (cont.):

11:30 Deflection Aspects of NASA's Analysis of Mitigation Alternatives Study
Vern Weyers, NASA (retired)

12:00 Lunch

SESSION 3: Deflection Missions & Technology

Chair: Gianmarco Radice, University of Glasgow

1:15 Poster Papers

1:30 Optimal Trajectories for NEO Deflection Missions
Max Vasile, University of Glasgow

2:00 Energy Requirements for Intercept and Rendezvous of Potentially Hazardous Asteroids
Glenn Peterson, The Aerospace Corporation

2:30 Industrial Assessment for the Don Quixote Mission
Ian Carnelli, European Space Agency

3:00 Break

3:15 Scenarios for Dealing with Apophis (Kinetic and GT)
Don Gennery, Consultant

3:45 Hovering Control of a Solar Sail Gravity Tractor Spacecraft for Asteroid Deflection
Bong Wie, Arizona State University

4:15 Optimal Impulsive Deflection Analysis and Mission Scenarios for Asteroid Apophis
Brent Barbee, Emergent Space Technologies

4:45 Multiple Mass Drivers as an Option for Asteroid Deflection Missions
John Olds, SpaceWorks Engineering

5:15 Continuing Efforts at MSFC to Develop Mitigation Technologies for Near Earth Objects
Robert Adams, NASA Marshall Space Flight Center

5:45 Adjourn



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Wednesday, March 7, 2007:

7:45 Registration & Continental Breakfast

8:30 Intro & Welcome
Bill Ailor, The Aerospace Corporation

8:40 Keynote: Bill Burrows, Professor, New York University

SESSION 4: Impacts & Effects

Chair: Clark Chapman, Southwest Research Institute

9:05 Poster Papers

9:15 Overview of Asteroid Impact Phenomenology
Clark Chapman, Southwest Research Institute

9:45 Tsunamis from Asteroid Impacts in Deep Water
Galen Gisler, University of Oslo

10:15 Break

10:30 Low-Altitude Airburst Contribution to the Impact Hazard
Mark Boslough, Sandia National Laboratory

11:00 Impact Tsunami Hazard - My Best Guess
Steven N. Ward, Univ. of California/Santa Cruz

11:30 Human Hazards from Impact Effects
Steve Chesley, NASA Jet Propulsion Laboratory

12:00 Lunch

SESSION 5: Preparing the Public

Chair: Caron Chess, Rutgers University

1:00 Poster Papers

1:45 The NEO Hazard: Interfaces between Scientists and the Public
Clark Chapman, Southwest Research Institute

2:15 Preliminary Observations Regarding Preparedness and Response to the Denver Asteroid Impact Event
Richard Davies, Executive Director, Western Disaster Center



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Wednesday, March 7, 2007 (cont.):

- 2:45 Planetary Defense in the Context of Current Approaches to Societal Security
Geoffrey Sommer, Homeland Security Institute
- 3:15 Break
- 3:30 Developing a Three-Period Strategy to Face a Global Space Threat: A Preliminary Analysis
Adeel Ghayur, University Institute of Information Technology, Pakistan
- 4:00 Composure and Panic in Time of Catastrophe: An Empowerment Approach to NEO Disaster Management
Albert A. Harrison, Department of Psychology, University of California – Davis
- 4:30 Risk Communication and Crisis Resilience
Caron Chess, Sociology Department, Rutgers University
- 5:00 Adjourn

Thursday, March 8, 2007:

- 7:45 Registration & Continental Breakfast
- 8:30 Intro & Welcome
Bill Ailor, The Aerospace Corporation
- 8:40 Keynote: René Oosterlinck, Director of External Relations, ESA; Professor, Ghent University
- SESSION 6: POLITICAL & POLICY
Chair: Richard Crowther, Rutherford Appleton Laboratories, UK
- 9:00 International Policy Issues
Rusty Schweickart, Association of Space Explorers Committee on NEOs
- 9:15 Legal Aspects of Planetary Defense Issues
Frans von der Dunk, Space Law Research, International Institute of Air & Space Law
- 9:30 The Domestic Politics of Planetary Protection
John Logsdon, Director, Space Policy Institute, George Washington University



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Thursday, March 8, 2007 (cont.):

9:45 Paper 4
Makoto Yoshikawa, Japan Spaceguard Association

10:00 Break

10:15 Paper 5
Michael Simpson, International Space University

10:30 Planetary Defense as a Major Rationale for Human Spaceflight and Exploration
Alain Dupas, Director of Strategic Studies, College de Polytechnique, Paris

10:45 Panel Discussion

12:00 Lunch

SESSION 7: PANEL SESSION: FINDINGS & RECOMMENDATIONS

1:00 Panel Discussion
Moderator: Bill Ailor, The Aerospace Corporation

Rep. of Session 1 - Don Yeomans
Rep. of Session 2 - Dave Lynch
Rep. of Session 3 - Gianmarco Radice
Rep. of Session 4 - Clark Chapman
Rep. of Session 5 - Albert Harrison
Rep. of Session 6 - Richard Crowther

2:00 Closing Comments
Bill Ailor, The Aerospace Corporation