

The 2010 NASA Laboratory Astrophysics Workshop

Park Vista Hotel, Gatlinburg, Tennessee, USA
October 25-28, 2010

Agenda

All general sessions will take place in Ballroom 3,4

Monday, October 25

4:00 – 7:00 pm Workshop registration, Lower Lobby

Tuesday, October 26

I. Workshop Introduction

8:00 – 8:30 am Continental breakfast, Prefunction Hall

8:30 – 8:45 *Welcoming remarks* – David Schultz, Daniel Wolf Savin

Chair – Daniel Wolf Savin

8:45 – 9:15 *Workshop goals and objectives* – Douglas Hudgins

II. Astro2010 Decadal Survey and Science Frontier Panel Reports

9:15 – 10:00 *The Astro2010 decadal survey: What does it say about laboratory astrophysics?* – Dan McCammon

10:00 – 10:30 Coffee break, Prefunction Hall

Chair – Hashima Hasan

10:30 – 11:00 *Cosmology and fundamental physics: Laboratory astrophysics needs of NASA astrophysics missions* – Wick Haxton

11:00 – 11:30 *Planetary systems and star formation* – Hector Arce

11:30 – 12:00 *Laboratory astrophysics in the stars and stellar evolution Astro 2010 Panel* – Marc Pinsonneault

12:00 – 1:30 Lunch, Ballroom 2

Chair – Douglas Hudgins

1:30 – 2:00 *Galactic neighborhood and laboratory astrophysics* – Daniel Wang

2:00 – 2:30 *Galaxies Across Cosmic Time* – Andrew Baker

III. Current and Future NASA Missions

2:30 – 3:00 *Herschel, SOFIA, and laboratory data* – John Pearson

- 3:00 – 3:30 Coffee Break, Prefunction Hall
 Chair – Caroline Kilbourne
- 3:30 – 4:00 *The James Webb Space Telescope: Mission overview and status* –
 Matt Greenhouse
- 4:00 – 4:30 *The Hubble Space Telescope: UV, visible, and near-infrared pursuits* –
 Jennifer Wiseman
- 4:30 – 5:00 *Laboratory astrophysics needs for current and future X-ray missions* –
 Randall Smith
- 5:00 – 6:30 Posters and Reception, Ballroom 1

Wednesday, October 27

IV. Laboratory Astrophysics: Atoms

- 8:00 – 8:30 am Continental breakfast, Prefunction Hall
 Chair – Steve Federman
- 8:30 – 9:00 *Atomic data from the ultraviolet to the infrared* – Glenn Wahlgren
- 9:00 – 9:30 *Review of laboratory astrophysics in support of X-ray astronomy* –
 Peter Beiersdorfer
- 9:30 – 10:00 *Low-energy electron-ion and ion-atom collisions: Progress and needs
 for modeling of future NASA astrophysics observations* – Phillip Stancil
- 10:00 – 10:30 Coffee break, Prefunction Hall
 Chair – Susanna Widicus Weaver
- 10:30 – 11:00 *High-energy electron-ion and photon-ion collisions: Status and
 challenges* – Tim Kallman

V. Laboratory Astrophysics: Molecules

- 11:00 – 11:30 *Vibrations and high-frequency rotations: Supporting current and future
 space missions in the laboratory* – Michael McCarthy
- 11:30 – 12:00 *Spectroscopic databases for astronomical applications* – Linda Brown
- 12:00 – 1:30 Lunch, Ballroom 2
 Chair – Lou Allamandola
- 1:30 – 2:00 *Molecular processes in the gas phase and on dust* – Eric Herbst

VI. Laboratory Astrophysics: Dust

- 2:00 – 2:30 *Laboratory spectroscopy of astrophysically-relevant materials:
Developing dust as a diagnostic* – Stephen Rinehart
- 2:30 – 3:00 *Formation of molecules on stardust: What we know and what we don't
know, but should* – Gianfranco Vidali
- 3:00 – 3:30 Coffee break, Prefunction Hall

VII. Laboratory Astrophysics: Ices

Chair – Karin Oberg

- 3:30 – 4:00 *Laboratory spectroscopy of ices of astrophysical interest* – Marla Moore
- 4:00 – 4:30 *The origins and evolution of molecules in icy solids* – Reggie L. Hudson

VIII. Laboratory Astrophysics: Plasmas

Chair – Martin Laming

- 4:30 – 5:00 *Laboratory study of plasma processes of astrophysical interests:
Magnetic reconnection, angular momentum transport, and dynamos* –
Hantao Ji
- 5:00 – 5:30 *High energy density laboratory astrophysics (HEDLA): Shocks, jets, and
other extreme dynamics* – Bruce Remington
- 5:30 – 7:00 Posters and Reception, Ballroom 1

Thursday, October 28

IX. Laboratory Astrophysics Working Groups

- 8:00 – 8:30 am Continental breakfast, Prefunction Hall
- 9:00 – 12:00 *Break-out sessions for working groups*
(with coffee break 10:00-10:30, Prefunction Hall)
- Atomic astrophysics working group*
(led by Daniel Wolf Savin and David Schultz), Garden View B
- Molecular astrophysics working group*
(led by Steve Federman and Susanna Widicus Weaver),
Garden View C
- Dust and ices astrophysics working group*
(led by Lou Allamandola and Karin Oberg), Garden View D
- Plasma astrophysics working group*
(led by Martin Laming), Garden View E
- 12:00 – 1:30 Lunch, Ballroom 2

- 1:30 – 1:45 *Atomic astrophysics working group report* – Daniel Wolf Savin and David Schultz
- 1:45 – 2:00 *Molecular astrophysics working group report* – Steve Federman and Susanna Widicus Weaver
- 2:00 – 2:15 *Dust and ices astrophysics working group report* – Lou Allamandola and Karin Oberg
- 2:15 – 2:30 *Plasma astrophysics working group report* – Martin Laming
- 2:30 – 3:00 Coffee break, Prefunction Hall
- 3:00 – 3:15 *Plenary discussion*
- 3:15 – 3:30 *Final remarks, adjourn workshop*
- 3:30 – 5:30 Scientific Organizing Committee executive session