

Laboratory for Atmospheric and Space Physics



Activity Report
2011
University of Colorado at Boulder

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LASP: A Brief History

In 1946-47, a handful of American universities joined with the military and with industry to initiate the era of space exploration. The University of Colorado was one of those pioneering universities. The first experiments to be performed in space were lofted by sub-orbital rockets. A key obstacle to these first rocket flights was providing a stabilized platform for cameras and other experiments. With support from the Naval Research Center and the Air Force Cambridge Research Laboratory (now the Phillips Laboratory), the University of Colorado formed a research group called the Upper Air Laboratory (UAL) to solve this problem. Their solution — called the biaxial pointing platform — cleared the way for some of the first major scientific discoveries made in space. Researchers and engineers from the UAL flew experiments into space on over 50 rocket flights before Sputnik. By 1965, the UAL had grown substantially. Along with this growth came a new building on campus and a new name: the Laboratory for Atmospheric and Space Physics. The public is invited to tour our facility and to observe the work that LASP does today.

A Message from the Director

It is ever more clear that U.S. economic vitality, as well as global competitiveness, has strong and critically important ties to the space research segment. Remote sensing, communications, surveillance, and a host of other areas of U.S. leadership are underpinned by space technology. Moreover, our national pursuit of robotic and human space exploration remains a cornerstone of U.S. aspirations.

A hallmark of the U.S. space program is that it is a partnership among government, industry, and academia. In this context, “academia” can range from a single professor and his or her small group of students to large university research labs such as LASP that may have hundreds of researchers, engineers, and students. There are common features across this spectrum of academic units. Academia brings to the table a geographically distributed and highly engaged community. By tradition and by nature, the university community brings a wealth of creative ideas. More often than not, students add a nimbleness and responsiveness that can be immensely beneficial while simultaneously being very low in cost to space projects.

Unfortunately, the backbone of our space program—academia—is under threat of serious budget constraints in the coming years. These will put a strain on the ability of our nation to creatively address national and economic security issues related to space. For there to be a vigorous and successful national space research enterprise, we need continuous observations of the Sun, Earth environs, and the solar system beyond. For many prior spaceflight projects, key universities have managed to work very successfully with NASA centers. But now it is less likely that our nation and its space research program can afford missions managed in “traditional” high-overhead ways. One could therefore envision that a renewed academic and commercial partnership could be the salvation of many aspects of space observational objectives. Such a partnership could let universities and companies work on low-cost, innovative space missions that could use the best design practices of research groups and successful businesses. This concept could also allow a reduction in the reviews and overburdening paperwork that are strangling the space business.

In the constrained circumstances that U.S. science and engineering now face, we need to use our best tools and most creative approaches. Universities can (and should) be mountains of innovation in the “flat world” described by Thomas Friedman in his best-selling book about globalization. In this setting it will be possible to take more risk, carry out research more affordably, and ultimately achieve the maximum potential of space research investments. Now more than ever, the crying need for better space observations demands that the nation return to the successful formula of strong partnerships among academia, industry, and government that was ushered in with the very formation of NASA in 1958. I sincerely hope LASP and CU will continue to play essential roles in this effort.

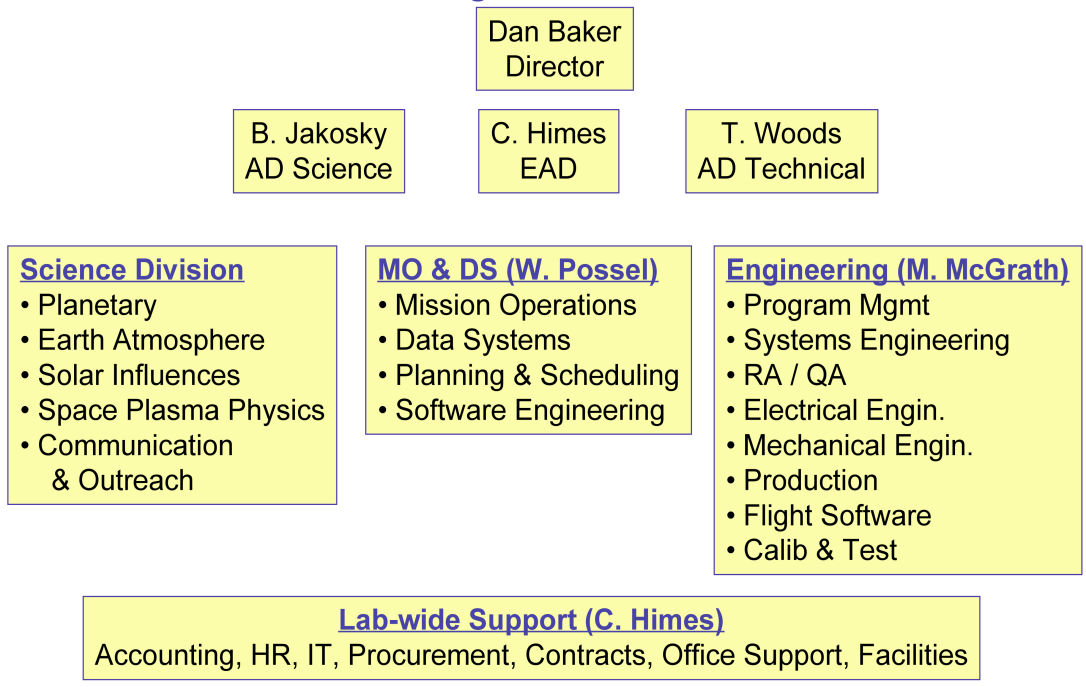
I continue to note that LASP succeeds in large measure by having the support of the CU administration. I sincerely thank the people in contracts administration, pro-

curement, facilities management, and other key areas that help us do our very special job. I particularly want to acknowledge the Vice Chancellor for Research, the Dean of the Graduate School, the Provost, and the Chancellor for their tireless support of LASP and its mission. I also thank the staff, faculty, and students of LASP for their remarkable work. Finally, special thanks go to Ann Alfaro for her careful efforts in preparing this report for 2011.

Daniel N. Baker

Please visit LASP's Website for the latest developments: <http://lasp.colorado.edu>

LASP Organization Chart



LASP Appropriated Funding

During the period 1/1/2011 to 12/31/2011 LASP appropriated funding totaled \$47,702,436 for support of 113 grants and contracts.

Research Support: 2011 Fiscal Year

Federal Sources

Commerce NOAA	\$401,154
DOD AF AFOSR	\$102,402
Jet Propulsion Laboratory	\$1,947,198
NASA Ames	\$1,365,282
NASA Goddard	\$28,005,993
NASA Headquarters	\$191,090
NSF	\$1,194,404
Total Federal Sources	\$33,207,523

Non-Federal Sources

Ball Aerospace & Technologies Corp.	\$1,636,111
Blue Canyon Technologies LLC	\$5,148
Carnegie Institution of Washington	\$409,490
George Mason University	\$39,561
Hampton University	\$1,142,541
Johns Hopkins University	\$113,447
Pennsylvania State University	\$22,646
Rice University	\$72,893
Southwest Research Institute	\$743,344
University Corp. for Atmospheric Research	\$42,312
University of Alaska Fairbanks	\$34,567
University of Arizona	\$28,750
University of California Berkeley	\$467,827
University of California Los Angeles	\$11,950
University of New Hampshire	\$9,695,234
University of Washington	\$11,593
York University	\$17,500
Total Non-Federal Sources	\$14,494,913
TOTAL FUNDING	<u>\$47,702,436</u>

Historical Financial Data Points by Fiscal Year (July 1 – June 30):

	FY05	FY06	FY07	FY08	FY09	FY10	FY11
Expenses	\$54.8M	\$43.0M	\$43.0M	\$37.9M	\$44.9M	\$67.4M	\$73.3M
Awards	\$49.5M	\$42.9M	\$48.6M	\$40.2M	\$66.9M	\$100.4M	\$55.3M

Daniel N. Baker, Director
LASP Scientists

Tenure Track:

Linnea M. Avallone
Frances Bagenal
Charles A. Barth (Ret.)
David Brain
Robert Ergun
Larry W. Esposito
Mihály Horányi
Brian Hynek
Bruce M. Jakosky
Sasha Kempf
Xinlin Li
Peter Pilewskie
Cora E. Randall
Mark P. Rast
Nicholas M. Schneider
Zoltan Sternovsky
Owen B. Toon

Andrew Collette
Peter Delamere
Vincent Dols
Scot Elkington
Francis G. Eparvier
Stefan Eriksson
Xiaohua Fang
Juan (John) Fontenla
John Gosling
Eberhard Grün
Jerald W. Harder
Lynn Harvey
Greg Holsclaw
Sean Hsu
Andrew Jones
Lars Kalnajs
Michael King
Greg Kopp
George M. Lawrence
(Ret.)
Wenlong Liu
William E. McClintock
Tom McCollom
Kevin McGouldrick
David Malaspina

Michael Mellon
Aimee Merkel
Anna Mocker
Mikki M. Osterloo
William Peterson
Manny Presicci
Erik C. Richard
Stuart Robbins
Gary J. Rottman (Ret.)
David W. Rusch
Sebastian Schmidt
Jamison Smith
Martin Snow
Miodrag Sremcevic
A. Ian F. Stewart
Glen R. Stewart
Gary E. Thomas (Ret.)
Feng Tian
Weichao Tu
Xu Wang
Dick White (Ret.)
Robert J. Wilson
Thomas N. Woods

Research Associates:

Nicole Albers
Laila Anderssen
Amir Caspi
Timothy A. Cassidy
Odele Coddington

Wenlong Liu
William E. McClintock
Tom McCollom
Kevin McGouldrick
David Malaspina

Visiting Scholars

Joseph Ajello, Jet Propulsion Laboratory, Pasadena, CA
Phil Chamberlin, NASA/GSFC, Greenbelt, MD
Stephane Ferron, L'Atmos/CNRS, France
Jonathan Hillier, United Kingdom
Antal Juhasz, KFKI Research Institute for Particle and Nuclear Physics, Budapest,
Hungary
Freider Klein
Konstantinos Konstantinidis, Greece
Robert McPherron, UCLA, IGPP, Los Angeles, CA
Eric Quemeras, L'Atmos/CNRS, France
Wayne Pryor, Central Arizona Coolidge, Coolidge, AZ
Peter Strub, Max-Planck Institut fur Sonnensystemforschung, Katlenberg-Lindau,
Germany

Markus Suter, PMOD, Davos, Switzerland
Arnaud Zaslavsky, University de Paris, Meudon, France

Engineering/Missions Ops/Program Support/Science

Engineering

Gregg Allison
Christine Andrews
Michael D. Anfinson
Judy Antman
Rory St. John Barrett
Susan Batiste
Douglas Bausch
Helmut P. Bay (Ret.)
Ryan Behner
Christopher Belting
Jeffrey Blunck
Bryce Bolton
Mary Bolton
Brian D. Boyle
Shelley Bramer
Catherine Brant
David Braun
Nathaniel Brennan
Vanessa Briggs
Jeff Brown
Patrick Brown
Chelsey Bryant
Heather Buck
Linda Buckhannon
Zachary G. Castleman
Elizabeth Cervelli
Jose Chavez
Wesley Cole
David Crotser
Jacob Costner
David Dewoina
Thomas Dixon
Sharon Dooley
Virginia Drake
Mark Drobilek
Charles Dumont
Gary Eldridge
Jenni Elke

Darren Erickson
Donald Farneth
Jason Farren
Nicolas Ferrington
Tim Flaherty
Bryan French
David Gathright
Alan Goodrich
Roger Gunderson
Scott Gurst
David Hall
Ward Handley
Douglas Hansen
David Harber
Cindy Hendrickson
Kelly Hepburn
James Herring
Karl Heuerman
Carl Himpfel
Patricia Soto Hoffman
Alan Hoskins
Vaughn Hoxie
Marston R. Jacobson
David James
James Johnson (Ret.)
Mark Jones
Magnus Karlsson
Joshua Kern
Mark Kien
Matthew King
Camden Kittredge
Michael Klapetzky
Scott Knappmiller
Edith Knehans
Richard Kohnert
Kraig Koski
Bret Lamprecht
Mark R. Lankton
Ryan Lewis
Alexander Liebe

Michael McGrath
James Mack
Karen Mackison
Jennifer Methlie
David Meyer
Edward Mores
Brooklyn Motz
Brenton Motz
Aref Nammari
James Neeley
Gregory Newcomb
David Norman
Glen Otzinger
Heather Passe
Norman C. Perish
Dan Prichard
Brian Pyke
Thomas Reese
Dwight Reinhardt
Mary Rider
Carol Jean Rigelsky
Timothy Ruske
Joel Rutkowski
Durbin Seidel
William Sharp
Patti Sicken
Alan Sims
Paul Smith
Thomas Sparn
Stephen Steg
David Street
Gail Tate
Trenton Taylor
Jon Theide
Edward M. Thiemann
William Thompson
Wayne Tighe
Katherine Trimble
Matt Triplett
Kathy Troxel
Valerie Trujillo

Scott A. Tucker
Gregory Ucker
Robert Valentine
William Vermeer
Douglas Vincent
Tracy Vincent
Stacy Wade
James Wallace
James Westfall
Neil White
Derrick Williams
Heather Reed Withnell
Peter Withnell
Ray Wrigley
Ed Wullschleger
Alan Yehle
Kenny J.S. Yoo
Jason Young
Jennifer Young
Stephen Ziegler

Mission Ops/Data Systems

Jason Beech
Stephane Beland
Michelle Bourgeois
Karen Beth Bryant
Michael Bryant
Steve Carson
James Craft
Jason M. Dahl
Mat Deneen
Alexandra DeWolfe
Michael Dorey
Donald Elsborg
Jack Faber
Sasha Forsyth
Samuel Gagnard
Ken Griest
Jason Gurgel
Edward Hartnett
Amanda Heaton
Christian Jeppeson
Alain J. Jouchoux
David E. Judd

Michelle Kelley
Peter Klein
Barry Knapp
Jay Kominek
Douglas M. Lindholm
Debra McCabe
Jerel Moffatt
Steve P. Monk
Steven Mueller
Michael Packard
Chris Pankratz
Russell Panneton
Emily Pilinski
Radu Popescu
Bill Possel
Tyler Redick
Lonnie Riesberg
Randy Reukauf
Pat Ringrose
Stephen Roughton
Sean Ryan
Crystal Salcido
Karen Simmons
Jacquelyn Smith
Patrick Smith
Robert Stimpfling
Brian Templeman
Dale Theiling
Blake Vanier
David Wescott
Anne Wilson
Robert John Wilson
Donald Woodraska

Administration

Cristina Barcilon
Robert P. Biro
Nina Davis
Paul deFalco
Michael Dillon
Barbara DiPasquale
Melissa Dozier
Zachary Eaton
Steve Ericksen
Brian Evans

Jason Feickert
Darcy Gallagher
Christin Gearhart
Alex Green
Don Gritzmacher
Matthew Groeninger
Carol Guy
Barbara Hahn
Caroline Himes
Rose A. Hoag
Bonnie W. Hotard
(Ret.)
Erick Jasiak
Gayle Jones
Brad Keiser
Mazn Kuldinow
Jason LaClair
Lindsay McCandless
Beth McGilvray
Andrew May
Greg Mecca
Debra Nastaj
Paige Northway
John M. Padgett
Katherine Pilewskie
Gary Rashkov
Susan Rogers
Susan Sand
Gary Schut
Dona Smith
Doug Smith
Lisa Sparhawk
Karen Springfield
Peter Wise

Science

Ann Alfaro (Ret.)
Laura Bloom
Ransom Christofferson
Kathleen Cirbo
Stephanie Renfrow Col-
lins
Vincent Dols
Keith Drake
Vanessa George

Cheryl Haugen
Bruce Kindel
Spencer LeBlanc
Thomas Mason

Paige Northway
Manny Presicci
Mark Robbins
Stuart Robbins

Evan Thomas
Erin Wood

2011 Retirees

Judith Antman
Richard Arnold
Roger Gunderson

2011 Ph.D. Graduates

English, Jason Matthew, Atmospheric and Planetary Science
December 16, 2011

"A sectional microphysical model to study stratospheric aerosol: Ions, geo-engineering, and large volcanic eruptions"

Thesis Advisor: Brian Toon

Fan, Tianyi, Atmospheric and Oceanic Sciences
Dec 16, 2011

"Modeling sea salt and sulfate aerosol over the global oceans to understand the origins of marine cloud condensation nuclei and the impact of pollution of them"

Thesis Advisor: Owen B. Toon

Hock, Rachel, Astrophysical and Planetary Sciences
December 16, 2011

"The role of solar flares in the variability of the extreme ultraviolet solar spectral irradiance"

Thesis Advisor: Francis Eparvier

Hoke, Monica R.T., Astrophysics and Planetary Sciences
December 16, 2011

"Characterizing water on early Mars through the geomorphic analysis, crater-age dating and sediment transport modeling of valley networks and deltas"

Thesis Advisor: Brian Hynek

Poppe, Andrew Reinhold, Physics
May 6, 2011

"Modeling, theoretical, and observational studies of the lunar photoelectron sheath"

Thesis Advisor: Mihály Horányi

Robbins, Stuart James, Astrophysical and Planetary Sciences
May 6, 2011

"Planetary surface properties, cratering physics, and the volcanic history of Mars from a new global martian crater database"

Thesis Advisor: Brian Hynek

Threnbath, Thien-Kim-Leckle, Atmospheric and Oceanic Sciences

December 16, 2011

"Undergraduate students' understanding of climatic change: A case study approach"

Thesis Advisor: Linnea Avallone

Trenary, Laurie, L., Atmospheric and Oceanic Sciences

December 16, 2011

"Multi-time scale students' understanding of climate change: A case study approach"

Thesis Advisor: Weiqing Han

Tu, Weichao, Aerospace Engineering Sciences

December 16, 2011

"Modeling Earth's Outer Radiation Belt Electron Dynamics: Radial Diffusion, Heating, and Loss"

Thesis Advisor: Xinlin Li

Graduate Students

Ian Aber

Asher F. Ali

Timothy J. Beatty

Suzanne Benze

Andrew Berg

James Binney

Lauren Weber Blum

Matthew J. Carton

Michael Chaffin

Robert Citron

Mariel Desroche

Justin Anthony Edrington

Weston Evans Edwards

Jason M. English

Tina (Tianyi) Fan

Jason Farmer

Jeffrey France

Mark Gerber

Max Hampson

Porter Haskins

Keri Hoadley

Rachel Hock

Monica R.T. Hoke

Rachel Humphrey

William Ralph Ireland

Peter T. Klein

Andrew C. Kren

Spencer LeBlanc

Jesse Lord

Anna Luebke

Patrick McBride

Prasanna Madhusudhanan

Emma Marcucci

John Martin

James Paul Mason

Colin A. Miller

Joshua J. Murphy

Vu Nguyen

Ethan D. Peck

Emily B. Pilinski

Gang Kai Poh

Andrew Poppe

Anthony P. Rasca

Yolanda Roberts

Miranda Rohlfing

Quintin Schiller

Donald Schmit

Anthony Shu

Shi Song

David Stokowski

Lin Su

Jamey Robert Szalay

Andrew Tomchek

Richard Urata

Corinne Vannatta

Donald A. Warbritton

Brandon Werdel

Donovan Wheeler

Eric Wolf

Pengfei Yu

Yunqian Zhu

Jianfeng Xie

Undergraduate Students

Nicholas Aberle
Christopher Anaya
Eric A. Anderson
Trevor Aparicio
Robyn Barber
Tierney Bamrick
Steven M. Baxley
Nicholas R. Beaty
Gabriel Bershenyi
Nikki Dyan Bloch
Michael F. Bonnici
David Matthew Born-
camp
Karalee Brugman
Joseph Christopher Burns
Spenser James Burrows
Dain Cilke
Max Clark-Rabinowitz
Adam J. Clarke
Mark R. Coffman
Rachel Anne Collins
Daniel J. Copel
Dinesh Das Costlow
Martin Czerep
Raymond Dao
Samuel N. Denny
Elizabeth A. DeVito
Zachary J. Dischner
Melanie Dubin
David Dyer
David Eason
Justin Edrington
Paul L. Fagerburg
Colin Fitzgerald
Katie M. Fitzgerald
Tyler R. Fox
Andrew H. Fruge
Erin George
Katie M. Hartman
Andrew S. Haynes
Joshua Hecht
Aaron Michael Henry

Margaret Higginson
Balazs A. Horanyi
Emily A. Howard
Christopher P. Hughes
Michael D. Hutchinson
Timothy Ikenouye
Valentin Vadimovich
Ivanitski
Lisa Jilek
Erik Kahn
Joshua Tree Karpel
Scott Yong Kim
Elise Ellen Kowalski
Christopher J. LaPanse
Dane T. Larsen
Anissa Lassek
Alexander Lieber
Huy Le
Samuel LeBlanc
Jenae Lestishen
Michael V. LoNigro
Steven James MacCoun
Katelynn McCalmont
William T. McNeill
Abhishek Mahen-
drakumar
Walter Mahfuz
Sudarsh Suresh Mallaya
Jonathan Steven Mandel
Lance Markovchick
Paul E. Morgan
Jocelyn B. Mulkey
Casey L. Myers
Kareem Nammari
James Neeley
Shawn Noland
Sean Ray Ortiz
Morgan Dene Osborne
Kiran Pachhai
Bryce A. Peters
Marcus Ryan Piquette
Kareesha Potter

Zachary Y. Pranger
Austin Harley Puckett
Marcus Reason
Krista S. Reed
Matthes Reichenbach
Danielle Russell
Wayne Russell
Matthew Sassu
Christopher Sawyer
Tanvi Shah
Erin Simons-Brown
Alijah D. Smith
Terry Smith
Landon Spear
Gregory Steiner
Eric Stevens
Colin Stewart
Jason Strong
Scott F. Taylor
Alexander W. Thom
Evan Thomas
Cassidy Damon Thomp-
son
Allison Toltz
Levey Trac Tran
Tyler J. Traver
Wiechao Tu
William W. Van Orden
Audrey M. Vertovec
Khoa Chao Vu
Pa Chia Vue
Isaac R. Wanamaker
Christopher J. Warren
Zachary J. Wehner
Brett Michael Weisman
Tyler Wingfield
Adam Wolf
Hanchao Wu
Ashley-Marie Zerr
Frank Li Zhang

Faculty Scientific Research Interests

Laila Andersson

Kinetic processes in space plasmas such as double layers, electron phase space holes and Alfvén waves (anywhere where measurement has or will be made). Atmospheric loss through ion outflow for objects such as Earth and Mars. Instrumentation for space plasma missions, for the moment to develop new techniques for future missions.

laila.andersson@lasp.colorado.edu
(303) 492-1689

Linnea Avallone

Experimental and theoretical studies of tropospheric and stratospheric chemistry, particularly of halogens and related species. Analyzing measurements of chemical species to understand dynamical processes in the stratosphere and troposphere. Development of instrumentation for autonomous in situ measurements of trace species related to understanding the lifetimes of anthropogenic pollutants.

avallone@miranda.colorado.edu
(303) 492-5913

Frances Bagenal

Magnetic fields and plasma environments of solar system objects—mainly Jupiter and the Sun, but more recently, other planets, comets and asteroids. Synthesis of data analysis and theory in the study of space plasmas; planetary magnetospheres and the solar corona. Involvement in NASA missions to planetary objects including Voyager, Galileo, Deep Space 1, New Horizons and Juno.

bagenal@colorado.edu (303) 492-2598

Daniel N. Baker

Research in space instrument design and calibration, space physics data analysis, and magnetospheric modeling. Study of plasma physical and energetic particle phenomena in the magnetospheres of Jupiter and Mercury, along with the plasma sheet and magnetopause boundary regions of the Earth's magnetosphere. Analysis of large data sets from spacecraft; involvement in missions to Earth's deep magnetotail and comets; the study of solar wind-magnetospheric energy coupling; theoretical modeling of magnetotail instabilities. Study of magnetosphere-atmosphere coupling; applying space plasma physics to study of astrophysical systems. Research to understand space weather and effects on human technology. Teaching of space physics and public policy, as well as public outreach to space technology community and general public.

daniel.baker@lasp.colorado.edu
(303) 492-4509

David Brain

Study of plasma environments and atmospheres of un-magnetized planets, including Mars, the Moon, and Venus. Study of atmospheric source and loss processes.

david.brain@lasp.colorado.edu
(303) 735-5606

Scot Elkington

Space physics theory and modeling, primarily understanding energetic particle dynamics in the inner magnetosphere in the context of radial diffusion and adiabatic transport processes within the radia-

tion belts. Also working on models of plasma sheet access of energetic particles to the inner magnetosphere through convection/substorm injection, development of physical space weather radiation belt models, and magnetohydrodynamic/particle simulations.

scot.elkingtno@lasp.colorado.edu
(303) 735-0810

Francis G. Eparvier

Research interests include the aeronomy of the upper atmosphere, the effects of solar irradiance and particle flux variability on the upper atmosphere, and the sources of that solar variability. Approaches include rocket and satellite measurements of the solar outputs and of the atmosphere, and data analysis and theoretical modeling. Currently Co-Investigator on the Thermosphere-Ionosphere-Mesosphere Energetics and Dynamics (TIMED) satellite Solar EUV Experiment (SEE).

eparvier@colorado.edu, (303) 492-4546,
<http://stripe.colorado.edu/~eparvier>

Robert Ergun

Robert Ergun specializes in space and astrophysical plasmas with applications to Earth's and Jupiter's magnetosphere, Mars' ionosphere, and the solar wind. He has developed space-flight electric field instruments for several NASA mission. Theoretical programs focus on small-scale plasma phenomena at Earth, Jupiter, Mars, and the solar wind, and include simulation and analytical modeling of magnetic reconnection, electron phase-space holes, parallel electric fields carried by double layers, and solar wind turbulence.

bob.ergun@lasp.colorado.edu
(303) 492-1560

Larry W. Esposito

Observational and theoretical studies of planetary atmospheres and rings; chemistry and dynamics of the Venus clouds; waves in Saturn's rings; numerical methods for radiation transfer.

espo@lasp.colorado.edu (303) 492-7325

Jerald Harder

Measurement and interpretation of solar spectral irradiance; Development of space-borne prism spectrometers.

jerry.harder@lasp.colorado.edu
(303) 492-1891

Mihály Horányi

Theoretical and experimental investigations of space and laboratory dusty plasmas. Electrodynamical processes and their role in the origin and evolution of the solar system, comets, planetary rings, plasma surface interactions. Dust charging, in situ and remote observations of dust. Dusty plasma experiments and space hardware development.

mihaly.horanyi@lasp.colorado.edu
(303) 492-6903

Brian M. Hynek

Geological processes that have affected terrestrial planets. Studies of water on Mars: geochemical history of Mars through hydrologic, geologic, and geomorphic analyses of the valley networks and deltas.; planetary geologic mapping; studying impact craters to better address the history of planets.

brian.hynek@lasp.colorado.edu
(303) 735-4312

Bruce M. Jakosky

Teaching and research activities focus on understanding the nature of planetary surfaces and atmospheres and the possibility for the existence of life in the universe. Specific activities include teaching undergraduate and graduate courses, training graduate students, research and grant activity pertaining to planetary science and exobiology, leading the campus effort in astrobiology, exploring the nature of the interactions between science and society, and outreach to the public.

bruce.jakosky@argyre.colorado.edu
(303) 492-8004

Sasha Kempf

Theoretical and experimental investigations of cosmic dust. Interaction of dust with the ambient plasma and dusty plasma effects in space. Formation and composition of cosmic dust. Dynamics of planetary rings. In-situ observation of dust. Theoretical and experimental investigation of impact plasmas. Laboratory hypervelocity impact experiments and space hardware development.

sasha.kempf@lasp.colorado.edu
(303) 735-2120

Greg Kopp

Development and characterization of the SORCE, Glory, and NPOESS Total Irradiance Monitors for solar irradiance measurements. Solar physics. Electro-optical instrumentation and electrical substitution radiometry.

greg.kopp@lasp.colorado.edu
(303) 735-0934

Xinlin Li

Space physics, data analysis and modeling. Especially interested in understanding the dynamics of relativistic electrons in the magnetosphere: the source, loss, and transportation of these MeV electrons; also interested in charged particle injections into inner magnetosphere during magnetic storms and substorms, and magnetosphere-atmosphere coupling due to energetic particle precipitations.

lix@kotron.colorado.edu (303) 492-3514

William E. McClintock

Observational Astrophysics - Ultraviolet observations of the outer atmospheres of cool stars and the very local ($d < 20$ pc) interstellar medium. Ultraviolet Observations of Planetary Atmospheres. Development of state-of-the-art instrumentation for high-resolution spectroscopy for the 900-2500/ wavelength range.

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(303) 492-8407

Michael Mellon

The history of water on Mars, the martian permafrost, surface-atmosphere interactions and the martian climate. Periglacial geology and geophysics on Earth and Mars. Use of ice-related geomorphic features as an indicating of the distribution of subsurface ice. Antarctic analogs to martian geomorphology. Laboratory research in transport processes in frozen soils, including gas diffusion and solute migration and the effects of water vapor, ice, and adsorbate on transport physics. Remote sensing and thermophysical properties of planetary regoliths, with specific emphasis on martian surface material. Planetary surface

temperature behavior and geothermal heat flow.

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(303) 492-1711

Peter Pilewskie

Research interests include solar spectral variability and its effects on terrestrial climate; SORCE and JPSS measurements and analysis of solar irradiance; quantifying the Earth-atmosphere radiative energy budget; surface, airborne, and satellite remote sensing of clouds and aerosols; and theoretical atmospheric radiative transfer.

peter.pilewskie@lasp.colorado.edu
(303)735-5589

Cora E. Randall

Primary interests include remote sensing of the earth's middle atmosphere, with particular emphasis on the polar regions. Investigation of processes related to stratospheric ozone depletion, polar mesospheric clouds, and atmospheric coupling through solar and magnetospheric energetic particle precipitation.

cora.randall@lasp.colorado.edu
(303) 492-8208

Mark Rast

Astrophysical fluid dynamics with emphasis on convective dynamics and scale selection, turbulence, the excitation of the solar p-modes, and the origin of solar/stellar irradiance variations. In addition to theoretical and computational work, efforts include operation of the Precision Solar Photometric Telescope (PSPT) at Mauna Loa Solar Observatory (MLSO) that obtains full disk images of the Sun at five

wavelengths with 0.1% photometric precision.

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(303) 492-5348

Nicholas M. Schneider

The physics of planetary magnetospheres, particularly the interactions between planetary plasmas and the satellites of the outer planets. Extensive ground-based observations of the Jupiter/Io system, especially imaging and spectroscopy of the Io atmosphere and plasma torus. Program has been expanded to include Hubble Space Telescope observations. Designing and building of a spacecraft to study the Jupiter/Io system.

nick.schneider@lasp.colorado.edu (303)
492-7672; <http://ganesh.colorado.edu/nick>

Martin Snow

Primary research interests include ultraviolet spectroscopy of stars and the sun and the interaction of comets with the solar wind. The SOLSTICE instruments on UARS and SORCE provide a wealth of information about solar activity in the 115-300 nm range on a variety of timescales, ranging from minutes (solar flares) to decades (solar cycle). Understanding the variation in the solar output will lead to understanding its influence on the Earth. The interaction of comets with the solar wind is best studied using wide-field photography. Both amateur and professional astronomers contribute to this effort, and one research activity has been to help coordinate the interaction of the two groups.

marty.snow@lasp.colorado.edu
(303) 735-2143

Zoltan Sternovsky

Instrument scientist and physicist; research is focused on detection and characterization of cosmic dust. Development of flight instruments for space missions and sounding rocket campaigns.

zoltan.sternovsky@lasp.colorado.edu
(303) 735-6272

A. Ian F. Stewart

The investigation by ultraviolet emissions of the aeronomy of planetary and satellite atmospheres, cometary comae, and Io's plasma torus.

stewart@viral.f.colorado.edu
(303) 492-4630

Glen R. Stewart

Origin and evolution of the solar system, with an emphasis on modeling the solid-body accretion of the terrestrial planets and the solid cores of the giant planets. Accretion of the Moon after a giant impact on the Earth. Modeling of satellite wakes and spiral density waves in planetary rings. Nonlinear dynamics of the three-body problem as applied to problems in solar system dynamics.

glen.stewart@lasp.colorado.edu
(303) 492-3737

Climate models for Earth, Mars, and Titan; simulating the climate of Earth at the time of the origin of life. Role of clouds and aerosols in climate. Theoretical studies of stratospheric aerosols; investigations of volcanic aerosols and studies of polar stratospheric clouds; theoretical studies of tropospheric clouds, aerosols and radiative transfer; experimental investigations of stratospheric and tropospheric phenomena; theoretical investigations of planetary atmospheres.

btoon@lasp.colorado.edu (303) 492-1534

Thomas N. Woods

Observational studies of the solar ultraviolet (UV) radiation, its variability, and its interaction with Earth's atmosphere. Principal investigator of NASA suborbital program to study the solar irradiance and thermospheric airglow. Principal investigator of the Solar EUV Experiment (SEE) on the TIMED mission. Co-investigator of the Solar Stellar Irradiance Comparison (SOLSTICE) experiment currently making solar UV irradiance measurements on the Upper Atmosphere Research Satellite (UARS) and planned for the Earth Observing System (EOS) missions.

tom.woods@lasp.colorado.edu
(303) 492-4224

FACULTY ACTIVITIES

Advanced Technology Solar Telescope (ATST) Science Working Group

Rast, Mark (Member)

Air Force Technical Applications Center (AFTAC)

Baker, Daniel (Chair, Satellite Review Panel)

American Association for the Advancement of Science (AAAS)

Baker, Daniel (Member (Fellow))

American Geophysical Union (AGU)

Bagenal, Frances (Macelwane Medal Committee)

Bagenal, Frances (Planetary Section Fellows Committee)

Bagenal, Frances (Scientific Organizing Committee for AGU Chapman Conference on Auroral Processes)

Baker, Daniel (Convenor, Special Sessions at AGU Annual meeting)

Baker, Daniel (Member, Space Station Advisory Panel)

Baker, Daniel (Member (Fellow))

Brain, David (Chaired session on Extreme Space Weather at 2011 Fall AGU meeting)

Elkington, Scot (Session Chair, Magnetospheric Plasma Waves and the Interaction with Energetic Particles, AGU Fall Meeting)

Elkington, Scot (Student Paper Judge, 2011 Fall AGU Meeting)

Esposito, Larry (Session Organizer, 2011 Fall AGU meeting: Planetary Rings)

Gosling, John (Member)

Horanyi, Mihaly (Session Organizer on Lunar Plasma Science, Fall, 2011)

Hynek, Brian (Member)

Jakosky, Bruce (President, Planetary Sciences Section)

Kopp, Greg (Chaired 2 sessions at 2010 Fall AGU meeting)

Peterson, William K. (Member)

Pilewskie, Peter (Convenor and Co-Chair, Climate Change and the Sun)

Randall, Cora (Session chair and convenor: Heliosphere atmosphere coupling and climate, Fall 2010 AGU meeting)

Richard, Erik (Co-Convenor of Special Session on Solar Spectral Irradiance Measurement, Fall 2010 AGU meeting)

Snow, Marty (Convenor of Solar Spectral Irradiance session)

Snow, Marty (Chair, AGU poster session on Solar Spectral Irradiance)

Sternovsky, Zoltan (Session Convenor, AGU Fall Meeting 2011)

Sternovsky, Zoltan (Session Chair, Plasma interactions with Airless Bodies)

Sternovsky, Zoltan (Session Chair, Extraterrestrial Dust)

Tien, Feng (Convenor Special session "Evolution of planetary atmospheres", Fall AGU meeting)

Toon, Owen B. (Member, AGU Fellows Selection Committee)

Woods, Thomas N. (Member)

American Meteorological Society (AMS)

Avallone, Linnea (Member)

King, M.D. (Member, Atmospheric Research Awards Committee)

Astronomical Society of the Pacific (ASP)

Schneider, Nicholas (Member)

Beijing Normal University

King, M.D. (Member of Scientific Steering Committee)

Boulder Campus Cyberinfrastructure Board (BCCB)

Rast, Mark (Member)

Boulder Matrix Space Advisory Group

Baker, Daniel (Member)

Boulder Solar Alliance

Baker, Daniel (Member and Co-Founder)

Kopp, Greg (Member and Secretary)

Rast, Mark (Member, Executive Committee)

Snow, Martin (Member and REU representative)

Canadian Network for Space Research

Baker, Daniel (Member, External Review Committee)

Cassini Public Relations Working Group

Esposito, L.W. (Chair)

Center for Limb Atmospheric Sounding (CLAS)

Baker, Daniel (Director)

Climate Absolute Radiance and Refractivity Observatory (CLARREO)

Kopp, Greg (Member, Decadal Survey mission Science Definition Team)

CLUSTER Science Working Team

Baker, Daniel (Member)

Colorado Space Coalition

Himes, Caroline

Possel, William

Committee on Space Research (COSPAR)

Baker, Daniel (Member, Commission D)

Esposito, Larry (Main Scientific Organizer, Planetary Atmospheres)

Randall, Cora (Member, Organizing Committee, COSPAR meeting Bremen, Germany, July 2010)

Editor or Editorial Board Member

Baker, Daniel (Journal of Atmospheric and Solar Terrestrial Physics, Space Weather)

Brain, David (Associate Editor, J. Geophys. Res. – Space Physics)

Esposito, L.W. (Editor, Icarus: “Cassini at Saturn”)

Horanyi, Mihaly (Editor, Special Issue in Planetary and Space Sciences)

Hynek, Brian (Editor, “Encyclopedia of Planetary Landforms”, Spring Press)

Jakosky, Bruce (Editorial Board, Planetary Exploration Newsletter)

Li, Xinlin (Associate Editor for J. Geophys. Phys, J. Geophys. Res., and Space Physics)

Li, Xinlin (Editorial Committee of Journal of Chinese Space Sciences (2008-2010)).

Peterson, W.K. (Editor, Geophysical Research Letters)

Sternovsky, Zoltan (Guest Editor, Special Issue IEEE Transactions of Plasma Science)

Snow, Martin (Editor, ISSI Scientific Report Number 12: Cross Calibration of Past and Present Far UV Spectra of Solar System Objects and the Heliosphere)

Electronic Geophysical Year (EGY)

Baker, Daniel (Chair, eGY Steering Committee)

European Space Agency (ESA)

Baker, Daniel (Member, CLUSTER Science Working Team)

European Fleet for Airborne Research (EUFAR)

Pilewskie, Peter (Member)

Geological Society of America (Planetary Geology Division)

Hynek, Brian (Member) (HAO)

Rast, Mark (Member, Instrumentation Advisory Committee)

Rast, Mark (Participant, Strategic planning retreat)

Hyperspectral Imaging and Sounding of the Environment (HISE)

Pilewskie, Peter (Convenor and Co-Chair, Toronto, July 2011)

International Academy of Astronautics (IAA)

Baker, Daniel (Member)

Baker, Daniel (Vice-Chair, Commission 1)

International Association of Geomagnetism and Aeronomy (IAGA)

Baker, Daniel (Member)

Baker, Daniel (Member, Executive Committee)

Baker, Daniel (Chair, IGY+50 Task Force)

International Association of Meteorology and Atmospheric Sciences (IAMAS)

Pilewskie, Peter (Member)

International Space Science Institute (ISSI)

Baker, Daniel (Member, Working Group)

Snow, Marty (Member, Working Group)

International Union of Geodesy and Geophysics (IUGG)

Baker, Daniel (Member, IGY+50 Advisory Committee)

Randall, Cora (Co-convenor IUGG 2011)

International Workshop on Solar-Terrestrial Physics

Baker, Daniel (Co-Convenor)

Janus Supercomputer Allocations Committee

Rast, Mark (Member)

Laboratory for Atmospheric and Space Physics (LASP)

Baker, Daniel (Director)

Associate Director for Science

Jakosky, Bruce

Associate Director for Technical Divisions

Woods, Thomas

Business Committee

Baker, Dan (Chair)

Himes, Caroline

Jakosky, Bruce

McGrath, Mike

Possel, Bill

Woods, Tom

Computer Support Advisory Committee (CSAC)

Kopp, Greg (Chair (Solar, LSTB, Mac))

Batiste, Susan (Eng, LSTB, Mac)

Crotser, David

Delamere, Peter (Planetary, Duane, Mac)

Elkington, Scot (Chair as of April 2011)

Eriksson, Stefan (Space Phys.)

Harvey, Lynn (Atmospheric, Duane)

Himes, Caroline (Admin. PC)
Jones, Andrew
Lewis, Ryan (Eng., LSTB, PC)
Rast, Mark (Solar, LSTB, clusters)
Schut, Gary (IT)

Education and Public Outreach Advisory Committee

Eparvier, Frank (Chair)
Avallone, Linnea
Bagenal, Fran
Himes, Caroline
Li, Xinlin
Randall, Cora
Reed, Heather
Stewart, Glen
Stewart, Ian

Executive Associate Director

Himes, Caroline

Executive Committee

Baker, Daniel (Chair)
Delamere, Peter
Gosling, John
Himes, Caroline
Jakosky, Bruce
Jones, Andrew
Kopp, Greg
McClintock, Bill
McGrath, Mike
Pilewskie, Peter
Possel, Bill
Randall, Cora
Ian Stewart
Toon, Owen B.
Tom Woods
Haugen, Cheryl (ex-comm support)

Friends of Magnetospheres (FOM) Seminar Series

Erikssen, Stefan (Seminar organizer)

LASP Data Stewardship Definition Committee

Randall, Cora (Member)

LASP IT Strategic Planning Committee

Delamere, Peter
Elkington, Scot
Himes, Caroline
McGrath, Mike
Possel, William
Schut, Gary

LASP LISIRD Steering Committee

Jones, Andrew
Snow, Martin

LASP Seminar Series Committee

Sternovsky, Zoltan (Chair)

LASP Tablet Users Group

DeWolfe, Alex (Chair)
Beech, Jason
Brown, Pat
Evans, Brian
Gathright, David
Himes, Caroline
Jones, Andrew
Lewis, Ryan
Mack, James
Wilson, Rob
Yehle, Alan

Library Committee

Snow, Marty (Chair)
Eparvier, Frank
Fang, Xiaohua
George, Vanessa
Horanyi, Mihaly
Knapp, Barry
Simmons, Karen
Wullschleger, Ed

Planetary Journal Club

Albers, Nicole (Organizer)

Planetary Program Webmaster

Hynek, Brian

Primary Unit Evaluation Committee

Avallone, Linnea (Member)

Promotion Committee

Pilewskie, Peter (Chair)
Gosling, John
McClintock, William E.
Randall, Cora

Proposal Development Committee (PDC)

Woods, Tom (Chair)
Sparn, Tom (Co-chair)
Baker, Dan
Drake, Ginger
Ergun, Bob
George, Vanessa (PDC support0
Himes, Caroline
Jakosky, Bruce
McClintock, Bill
McGilvray, Beth
McGrath, Mike
Mecca, Greg
Pankratz, Chris
Possel, Bill
Reed, Heather
Richard, Erik
Ryan, Sean
Sfernovsky, Zoltan
Tate, Gail

Social Committee

Bloom, Laura
Bryant, Chelsey
Bryant, Karen
Buck, Heather
Davis, Nina
DeNeen, Matt
Griest, Ken
Harvey, Lynn
Himes, Caroline
Hoag, Rose
McCabe, Deb
Osborne, Darren
Possel, Bill

Space Allocation Committee

Li, Xinlin (Member)
Sternovsky, Zoltan (Member)

Sponsored Visitor Committee

Harder, Jerry (Chair)
Elkington, Scot
McClintock, Bill
Rast, Mark

Magnetosphere of the Outer Planets

Bagenal, Frances (Scientific Organizing Committee)

Mercury Surface, Space Environment, Geochemistry, and Ranging Mission (MESSENGER)

Baker, Daniel (Member, Science Working Team)

National Academies

Baker, Daniel (Chair, Space Studies Board Steering Committee)
King, M.D. (Member, Climate Research Committee)
King, M.D. (Board Member, Atmospheric Sciences and Climate)

National Academy of Engineering (NAE)

Baker, Daniel (Member)

National Academy of Sciences (NAS)

Baker, Daniel (Associate Member)
Baker, Daniel (Chair, NAS Space Studies Board Steering Committee Decadal Survey)
Baker, Daniel (Member, Space Studies Board Executive Committee)
Baker, Daniel (Chair, Organizing Committee (Space Weather Economic Impacts Workshop))
Baker, Daniel (Chair, NAS/NCR Committee on Solar and Space Physics (CSSP))
Esposito, Larry (Member, Committee on Cost Growth in Space and Earth Sciences)

National Aeronautics and Space Administration (NASA)

Albers, Nicole (Member, Science Review panel for ROSES2010 Planetary Geology and Geophysics Program)
Bagenal, Frances (Member)
Baker, Daniel (Advisor, Sun-Earth Connections Advisory Committee)
Baker, Daniel (Member, Magnetospheric Multiscale Mission, Science Team)
Elkington, Scot, (Member, THEMIS/RSBP Science Working Group)
Elkington, Scot (Leader of Discussion Panel "Magnetospheric Consequences of the Recent Solar Minimum")
Horanyi, Mihaly (Member, NASA Planetary Data System Small Bodies Node Advisory Board)

Jakosky, Bruce (Member, Mars Exploration Program Analysis Group (MEPAG))
Jakosky, Bruce (Member, Mars Architecture Review Team)
Kopp, Greg (Member, Science Definition Team for CLARREO (Climate Absolute Radiance and Refractivity Observatory) Decadal Survey mission)
Pilewskie, Peter (Member, CLARREO Science Definition Team)
Pilewskie, Peter (Member, Decadal Survey Mission)
Pilewskie, Peter (Member, NASA Living With A Star Targeted Research and Technology Program Steering Committee)
Randall, Cora (Member, Heliophysics Data and Computing Working Group)
Randall, Cora (Member, Living With a Star Targeted Research and Technology steering Committee)
Rast, Mark (Member, NASA Heliophysics Research: Solar and Heliospheric Science, proposal review committee)
Toon, Owen B. (Organizer, planning committee for NASA Field Program SEAC4RS on effect of Asian air pollution on global climate)

National Oceanic and Atmospheric Administration (NOAA)

Baker, Daniel (Member, External Strategic Planning Group)
Baker, Daniel (Member, NOAA Strategic Planning Group)
Pilewskie, Peter (Organizer, Solar Irradiance Requirements Workshop)

National Research Council (NRC)

Pilewskie, Peter (Member, Committee on The Effects of Solar Variability on Earth's Climate)
Pilewskie, Peter (Organizer and Co-Chair, The Effects of Solar Variability on Earth's Climate)

National Science Foundation (NSF)

Baker, Daniel (Member, Geosciences Advisory Committee)
Baker, Daniel (Chair, Committee of Visitors – Geospace)
Elkington, Scot (Co-Chair, Research Focus Group for GEM program)
Eriksson, S. (Co-Chair, NSF-GEM Focus Group)
Rast, Mark (Program proposal Review committee)

National Space Weather Program Assessment (NSWPA)

Baker, Daniel (Member, Joint Action Group (JAG))

Optical Society of America

Kopp, Greg (Director at Large for Rocky Mountain section)

Physics of Dusty Plasmas International Meeting

Horanyi, Mihaly (Program Committee Chair)

Planetary Society

Jakosky, Bruce (Member, Advisory Board)

Radiation Belt Storm Probe Science Team

Baker, Daniel (Member)

Reviewer of Manuscripts, Proposals, or Creative Work

Albers, Nicole (Reviewer of proposals for NASA)
Albers, Nicole (Reviewer of scientific paper submitted to Nonlinear processes in Geophysics)
Andersson, Laila (Reviewer of manuscripts for J. Geophys. Res., Geophys. Res. Lett., Physics of Plasmas, Earth, Planets and Space)
Avalone, Linnea (Reviewer of proposals for NASA, NSF, Rutherford Fellowship; reviewer of manuscript for Atmospheric Measurement Technologies)
Bagenal, Frances (Reviewer of proposals and manuscripts)
Baker, Daniel (Geophys. Res. Letters, J. Atmospheric and Terrestrial Physics, J. Geophys. Res., Planetary Space Science, NASA and NSF Proposals)
Brain, David (Reviewer of manuscripts for J. Geophys. Res., Geophys. Res. Lett., Icarus, Space Science Rev., Icarus, Earth, Planets and Space)

Brain, David (Reviewer of NASA proposals)

Coddington, Odelle (Reviewer of manuscripts for Atmospheric Measurement Techniques; J. of Marine Science, and J. Geophys. Res.)

Delamere, Peter (Reviewer of proposals for NASA and NSF)

Elkington, Scot (Reviewer of manuscripts for JGR and GRL)

Elkington, Scot (Reviewer of proposals for NASA and NSF)

Ergun, Robert (Reviewer of manuscripts for J. Geophys. Res., Geophys. Res. Lett., and Physics of Plasmas)

Eriksson, Stefan (Reviewer of manuscripts for J. Geophys. Res., Annales Geophysicae, and Astronomy and Astrophysics)

Eriksson, Stefan (Reviewer of proposals for NASA)

Esposito, Larry (Reviewer of manuscripts for Science, Icarus, Geophys. Res. Lett.)

Esposito, Larry (Reviewer of proposals for NASA and NSF)

Fang, Xiaohua (Reviewer of manuscripts for Geophys. Res. Lett., Icarus, J. Geophys. Res.)

Fang, Xiaohua (Reviewer of proposals for NASA)

Fontenla, John (Reviewer of proposals for NASA)

Fontenla, John (Reviewer of manuscripts for Astronomy and Astrophysics, Astrophysical J. Lett., and Solar Physics)

Gosling, John (Reviewer of proposals for NSF, reviewer of manuscripts for J. Geophys. Res., Astrophys., Space Science Rev., and Physics of Plasmas)

Harder, J.W. (Reviewer of manuscripts for Advances in Space Research, Geophys. Res. Lett., and J. Geophys. Res.)

Harder, J.W. (Reviewer of proposals for National Science Foundation, Living With a Star, and Innovations Small Grant Program (EISG, California Energy Commission))

Harvey, V.L. (Reviewer of manuscripts for Geophys. Res. Lett., Atmospheric Sciences, J. Atmos. Chem. and Physics, J. Atmos and Solar-Terrestrial Physics, Quarterly J. of Royal Meteor. Soc., and Climatic Change)

Hendrix, A. (Reviewer of manuscripts for Icarus)

Holsclaw, G.M. (Reviewer of manuscript for Planetary and Space Science)

Horanyi, Mihaly (Reviewer of manuscripts for J. of Geophys. Res.-Space, Physics of Plasmas, Nature, Icarus)

Horanyi, Mihaly (Reviewer of proposals for NASA, NSF, and DOE)

Hynek, Brian (Reviewer of manuscripts for Nature, Nature Geoscience, Geophys. Res. Lett., Icarus, J. Geophys. Res., and Planetary and Space Science)

Hynek, Brian (Reviewer of proposals for NASA)

Jakosky, Bruce (Reviewer of proposals for NASA)

Jones, Andrew (Reviewer for Information Technology Research Journal)

Kalnajs, Lars (Reviewer of proposal for NSF and Natural Environment Research Council (UK))

Kalnajs, Lars (Reviewer of manuscript for Atmospheric Chemistry and Physics)

Kempf, Sascha (Reviewer of proposals for NASA)

Kindel, Bruce (Reviewer of manuscripts for J. Geophys. Res.)

Kindel, Bruce (Reviewer of proposals for European Space Agency)

King, Michael (Reviewer of manuscripts for Environmental Chemistry and Physics, International Journal of Remote Sensing, Journal of Atmospheric Sciences, Journal of Applied Meteorology and Climatology)

Kopp, Greg (Reviewer of evaluations for NASA and NRL)

Kopp, Greg (Reviewer of manuscripts for Solar Physics and Astronomy and Astrophysics)

Li, Xinlin (Reviewer of proposals for NASA and NSF)

Li, Xinlin (Reviewer of manuscripts for J. Geophys. Res., Geophys. Res. Lett., J. of Space Weather, J. Atmos. and Solar-Terrestrial Physics, Science of China, and Annales Geophysicae)

McClintock, William E. (Reviewer of manuscripts for Icarus and J. Geophysical Research)

Malaspina, David (Reviewer of manuscripts for Ap. J.)

Randall, Cora (Reviewer of manuscripts for ACP, JGR, GRL)

Randall, Cora (Reviewer of proposals for NSF and UK National Environment Research Council)

Rast, Mark (Reviewer of proposals for European Physical Journal)

Peterson, W.K. (Reviewer of proposals for NSF)

Peterson, W.K. (Editor, Geophys. Res. Letters)

Pilewskie, Peter (Reviewer of proposals for NASA)

Pilewskie, Peter (Reviewer of manuscripts for Geophys. Res. Letters and J. of Geophysical Research)
Rast, Mark (Reviewer of manuscripts for Solar Physics, Astrophysical Journal, Astronomy and Astrophysics, European Physical Journal B, and Cambridge University Press)
Schmidt, K.S. (Reviewer of manuscripts for Atmospheric Research, J. Geophys. Res., Atmospheric Chem. and Physics, Atmospheric Measurement Techniques, Quarterly Journal of the Royal Meteorological Society (UK), Theoretical and Applied Climatology, and Geophys. Res. Letters)
Schmidt, K.S. (Reviewer of proposals for NASA)
Schneider, Nicholas (Reviewer of proposals for NASA and NSF)
Snow, Marty (Reviewer of manuscripts for Geophys. Res. Letters and Solar Physics)
Snow, Martin (Reviewer of proposals for NSF)
Sternovsky, Zoltan (Reviewer of manuscripts for Annales Geophysicae, Astrophys. J., Planetary and Space sciences, CEAS Space Journal)
Sternovsky, Zoltan (Reviewer of proposals for NASA and Grant Agency of the Czech Republic)
Stewart, Glen (Reviewer of proposals for NASA)
Tien, Feng (Reviewer of manuscripts for Icarus, Planetary and Space Sciences, Astronomy and Astrophysics)
Tien, Feng (Reviewer of proposals for NASA)
Wang, Xu (Reviewer of proposals for NASA)
Wang, Xu (Reviewer of manuscripts for Planetary and Space Science and J. Geophys. Res.)

Scientific Committee on Solar-Terrestrial Physics (SCOSTEP)

Baker, Daniel (Member, Scientific Committee)
Merkel, Aimee (Task-2 Project 3 Member, CAWSES II)

Sigma Xi

Baker, Daniel (Member)

Solar Anomalous magnetospheric Particle Explorer (SAMPEX)

Baker, Daniel (Member, SAMPEX Science Working Team)

Solar Radiation and Climate Experiment (SORCE)

Kopp, Greg (Member, Scientific Organizing Committee for 2011 Science Meeting)
Pilewskie, Peter (Member, 2010 Meeting Organizing Committee)
Snow, Martin (Chair, Comparative Sun-Star Cycles session at SORCE Science Meeting)
Snow, Martin (Chair, Poster Session at SORCE Science Meeting)
Snow, Martin (Contributor, SORCE Newsletter (various 2011 dates))

South African National Space Agency

King, M.D. (Member, International Review Committee of National Space Program)

University of Colorado

Aerospace Engineering Department (ASEN)

Baker, Daniel (Member, External Advisory Board)
Li, Xinlin (Member, Graduate Committee)
Li, Xinlin (Member, Tanner Evaluation Committee)
Li, Xinlin (Member, Undergraduate Teaching Curriculum Committee)
Sternovsky, Zoltan (Member, Undergraduate Committee)
Sternovsky, Zoltan (Member, Graduate Committee)

Astrophysics and Planetary Sciences (APS)

Bagenal, Frances (Co- Chair)
Bagenal, Frances (Member, Faculty Search Committee)
Bagenal, Frances (Chair of Departmental Course Assignments – Spring 2010)
Bagenal, Frances (Member, Program Review Committee)
Baker, Daniel (Member, Graduate Admissions Committee)
Rast, Mark (Undergraduate Advisor)

Rast, Mark (Examinations Committee)
Rast, Mark (Executive Committee)

Atmospheric and Oceanic Sciences Department (ATOC)

Harvey, V.L. (Organizer of seminar series)
Pilewskie, Peter (Chair, Laboratory and facilities Committee)
Pilewskie, Peter (Member, Course Fees Committee)
Pilewskie, Peter (Co-Chair, ATOC PRP Committee)
Randall, Cora (Member ATOC Executive committee)
Randall, Cora (Chair: ATOV graduate student admissions committee)
Randall, Cora (ATOC graduate student advisor)
Randall, Cora (ATOC acting chair)
Randall, Cora (ATOC Faculty peer review/visitation)
Smith, Jamison (Hosted Seminar Series)
Toon, Owen B. (Department Chair)

Boulder Faculty Assembly

Eparvier, Francis (Member at Large)
Harvey, Lynn (LASP Representative at Large)

Boulder Faculty Survey (HERI CU)

Rast, Mark (Member)

Budget and Planning Committee

Himes, Caroline, (Member)

Chancellor's Federal Relations Advisory Committee (FRAC)

Baker, Daniel (Member)

Excellence in Leadership Program

Randall, Cora (Participant)

Faculty Assembly Committee on Women

Avallone, Linnea (Member)

Graduate School

Baker, Daniel (Member, Institute Directors Group)

Joint Faculty (Aerospace)

Li, Xinlin
Sternovsky, Zoltan

Joint Faculty (Astrophysics and Planetary Sciences Department (APS))

Bagenal, Frances
Baker, Daniel
Ergun, Robert
Esposito, Larry
Rast, Mark
Schneider, Nicholas

Joint Faculty (Atmospheric and Oceanic Sciences Department (ATOC))

Toon, Owen B. (Chair)
Avallone, Linnea
Pilewskie, Peter
Randall, Cora E.

Joint Faculty (Geology Department)

Hynek, Brian (Member, Executive Committee)
Jakosky, Bruce (Member)

Joint Faculty (Physics Department)

Horanyi, Mihaly

Task Force on Restricted, Proprietary, and Classified Research

Himes, Caroline (Member)

Randall, Cora (Member)

Possel, William (Member)

Member of a Dissertation/Thesis Committee

Avallone, Linnea

Bagenal, Frances

Baker, Daniel

Elkington, Scot

Ergun, Robert

Fang, Xiaohua

Gosling, John

Horanyi, Mihaly

Hynek, Brian

Jakosky, Bruce

Kalnajs, Lars

Li, Xinlin

Newman, David L.

Peterson, W.K.

Pilewskie, Peter

Randall, Cora

Rast, Mark

Schmidt, Konrad

Schneider, Nicholas

Sternovsky, Zoltan

Stewart, Glen

Toon, Owen B.

Member of a Masters or Ph.D. Qualifying Examination Committee

Avallone, Linnea

Bagenal, Frances

Fang, Xiaohua

Hynek, Brian

Jones, Andrew

Li, Xinlin

Pilewskie, Peter

Randall, Cora

Rast, Mark

Schneider, Nicholas

Sternovsky, Zoltan

New Course Development

Avallone, Linnea

Rast, Mark

Schneider, Nicholas

Toon, Owen B.

Physics Department

Horanyi, Mihaly (Undergraduate)

Horanyi, Mihaly (Evaluations Committee)

Horanyi, Mihaly (Chair, CCLDAS Faculty Search Committee)

Principal Dissertation/Thesis Advisor

Andersson, Laila

Avallone, Linnea

Bagenal, Frances

Baker, Daniel

Delamere, Peter
Ergun, Robert
Esposito, Larry
Harvey, V.L.
Horanyi, Mihaly
Hynek, Brian
Jakosky, Bruce
King, Michael
Kopp, Greg
Li, Xinlin
Pilewskie, Peter
Randall, Cora
Rast, Mark
Schneider, Nicholas
Sternovsky, Zoltan
Toon, Owen B.

Student Advising

Andersson, Laila
Avallone, Linnea
Bagenal, Frances
Caspi, Amir
Delamere, Peter
Harvey, V.L.
Hynek, Brian
Jones, Andrew
Kopp, Greg
McClintock, William E.
Malaspina, David
Merkel, Aimee
Randall, Cora
Rast, Mark
Schmidt, Konrad
Schneider, Nicholas
Snow, Martin
Sternovsky, Zoltan

Supervisor of Postdoctoral Researchers

Avallone, Linnea
Bagenal, Frances
Hynek, Brian
Jakosky, Bruce
Sternovsky, Zoltan
Toon, Owen B.

Vice Chancellor's Innovative Seed Grant Program

Hynek, Brian (Member, Review Panel)

Vice Chancellor's Research Cabinet

Baker, Daniel (Member)

University Center for Atmospheric Research (UCAR)

Randall, Cora (Member, Steering Committee for NASA Living with a Star Heliosphysics post-doc program)

University of Northern Iowa

Hynek, Brian (Member, External Advisory Board; Dept. of Earth Sciences)

University Space Research Association (USRA)

Baker, Daniel (Member Council of Institutes)

Whole Heliospheric Interval Science Team

Snow, Martin (Member)

Workshop on Radiation Belts

Baker, Daniel (Organizing Committee)

FACULTY HONORS/AWARDS

Baker, Daniel: Awarded Endowed Chair at CU/Boulder “Broad Reach Endowed Chair in Space Science”, September 2011.

Baker, Daniel: Awarded Troitskaya-Cole Lectureship for 2011, awarded by the International Union of Geodesy and Geophysics

Jakosky, Bruce (and MAVEN Team), NASA Group Achievement Award, MAVEN Phase B

Jakosky, Bruce: Selected as Fellow, by the American Geophysical Union

Pilewskie, Peter: Humboldt Research Award, presented by the Alexander von Humboldt Foundation.

Toon, Owen B.: Roger Revelle Award, awarded by the American Geophysical Union

Toon, Owen B.: Space Science Distinguished Visiting Fellow, awarded by the W.M. Keck Institute

Sternovsky, Zoltan: Young Scientist Award, presented by the Union of Pure and Applied Physics

Courses Taught by LASP Faculty

Name	Description
Bagenal, Frances	Accelerated Intro to Astronomy
Brain, David	Introduction to Astronomy
Ergun, Robert	Plasma Astrophysics
Ergun, Robert	Astronomy – Planets
Esposito, Larry	Planets, Moons and Rings
Horanyi, Mihaly	Electricity and Magnetism
Horanyi, Mihaly	Graduate Planetary seminar on Spacecraft Instrumentation
Hynek, Brian	Planetary Surfaces
Hynek, Brian	GIS for Geologists
Hynek, Brian	Natural catastrophes and geologic hazards
Hynek, Brian	Planetary Field Geology
Kempf, Sasha	Sound and Music
Li, Xinlin	Space Hardware Design
Li, Xinlin	Senior Design
Pilewskie, Peter	Atmospheric radiation seminar
Pilewskie, Peter	Special Topics in atmospheric and oceanic sciences: Instrumentation
Smith, Jamison	Physics of sound and music
Randall, Cora E.	Policy and Climate
Randall, Cora E.	Seminar in Atmospheric and Oceanic Sciences
Randall, Cora E.	Introduction to Atmospheric Radiative Transfer and Remote Sensing
Rast, Mark	Solar and Space Physics
Rast, Mark	Stars and Galaxies
Sternovsky, Zoltan	Aerospace electronic and communication
Sternovsky, Zoltan	Space instrumentation
Toon, Owen B.	Seminar in clouds and aerosols
Toon, Owen B.	Clouds and Aerosols

Colloquia and Informal Talks Spring 2011

- Bagenal, Frances, The magnetosphere of Jupiter: What will Juno find?
- Baker, Daniel, CU/LASP, Latest Results from MESSENGER at Mercury
- Bernath, Peter, University of York, UK, The Atmospheric Chemistry Experiment (ACE): Mission Overview and Latest Results
- Boudouridis, Athanasios, SSI, Response of ionospheric convection to solar wind dynamic pressure enhancements and implications for magnetospheric reconnection
- Capri, Amir, UC/Berkeley, Super-hot ($T > 30\text{MK}$) Thermal Plasma in Solar Flares
- Coddington, Odele, CU/LASP, Clouds in Earth's lower atmosphere: Views from near and far give insight into their regulation of climate
- Coddington, Odele, CU/LASP, Clouds in the Earth's Lower Atmosphere: Views from near and far give insight into their regulation of climate
- Crowley, Geoff, ASTRA, Thermospheric density Enhancements from Unexpected Energy Deposition during Bz North and Strong By Conditions
- deGouw, Joost, NOAA, Organic Aerosol Formation Downwind from the Deepwater Horizon Oil Spill
- Dyrud, Lars, Johns Hopkins University Applied Physics Laboratory, Radar Observation of Meteor Generated Plasmas: Understanding the Impacts Billions of Sand and Dust Sized Meteoroids
- Eparvier, Francis, CU/LASP, The Solar EUV Irradiance Journey: Are we there yet?
- Ergun, Robert, CU/LASP, Parallel electric fields in the magnetotail
- Eriksson, Stefan, CU/LASP, THEMIS-C observations of ion and electron velocity signatures within solar wind reconnection exhausts
- Feingold, Graham, NOAA, The open-cellular cloud system as a coupled Oscillator
- Gekelman, Walter, CU/Physics, Three-dimensional magnetic field line reconnection involving magnetic flux ropes and current sheets
- Gombosi, Tamas, U. of Michigan, From Sun to Mud: Adventures of a model developer
- Gosling, John, CU/LASP, Magnetic reconnection in the solar wind: A retrospective
- Hodges, Richard, CU/LASP, The lunar atmosphere: Some ado about almost nothing
- Hsu, Hsiang-Wen (Sean), CU/LASP, Messages carried by Nanodust Stream Particles from Saturn
- Kampe, Thomas, NEON Inc., The Role of Airborne Remote Sensing in the National Ecological Observatory Network (NEON)
- Kahn, Ralph, NASA/Goddard, Aerosol remote sensing from space – Where we stand, where we're heading
- Kopp, Greg, CU/LASP, The Sun and Earth's climate
- Lankton, Mark, CU/LASP, The MESSENGER Mission
- Li, Xinlin, CU/LASP, Behavior of MeV electrons at geosynchronous orbit during the last two solar cycles: Renewed understanding of the external driver

Love, Jeffrey, USGS, Secular increase in geomagnetic activity and emergence

Lundin, Rickard, IRF, Sweden, Alfvén wave ion acceleration at Mars

Malaspina, David, CU/LASP, Solar Probe Plus: FIELDS science and measurement challenges

Marshak, Alexander, NASA/GSFC, Remote sensing on aerosol properties in a cloudy world from MODIS and CALIOP

Merkel, Aimee, CU/LASP, The AIM mission: Examining clouds at the edge of space

Nef, Todd, BASD, From Jars to Stars: How Ball came to build a comet-hunting machine

Onsager, Terry, NOAA, Research priorities for Space Weather Applications

Parsons, Mark, National Snow and Ice Data Center, Data Citation and Peer-Review

Rodriguez, Ernesto, JPL, Ocean vector winds climate time series: Why they matter and how QuikSCAT can still help

Rodriguez, Juan, NOAA, An introduction to the new GOES 13-15 Magnetospheric electron and proton data

Ryerson, T.B., NOAA, Deepwater horizon atmospheric emissions constrain air-water partitioning, hydrocarbon fate, and leak rate

Schiller, Quintin, CU/LASP, The Kalman filter and a progress report on its applications to radiation belt electrons

Singer, Howard, NOAA, Multipoint observations of the large substorm associated with the Galaxy 15 anomaly

Uzzle, Brian, Digital Globe, Remote Sensing and Space Policy

Volkamer, Rainer, CU/CIRES, Evidence for Novel Chemistry at the Ocean-Atmosphere Interface: A heterogeneous

ous open ocean source for Iodine Oxide and Glyoxal

Wilson, Robert, CU/LASP, The path to DevIAnT Moments: Why extracting thermal plasma parameters (n , T , V) of outer planetary magnetospheres is so tricky; Progress made and results

Fall 2011

Armes, Steven, Sheffield University, UK, Space science applications for polypyrrole-based particles

Bagenal, Fran, CU/LASP, What will Juno see when it flies over Jupiter's poles?

Desroche, Mariel, CU/LASP, Conditions at the Jovian magnetopause and implications for the solar wind interaction

Eriksson, Stefan, CU/LASP, A statistical THEMIS analysis of vortex-induced magnetic islands at the Flank magnetopause

Hudson, Mary, Dartmouth College, Radiation Belt Electron Response to CME- and CIR-driven Geomagnetic Storms

Hynek, Brian, CU/LASP, Assessing the potential for past life on the Red Planet

Hynek, Brian, CU/LASP, Planetary mission field tests: attempts to maximize scientific return

Jakosky, Bruce, CU/LASP, Mars climate change and the 2013 MAVEN Mission to Mars

Kempf, S., CU/LASP, Liquid water on Saturn's Ice Moon Enceladus

Kopp, Greg, CU/LASP, Improving radiometry for climate studies

Lapenta, Giovanni, CU/LASP, Current steps toward a European integrated and federated space weather forecasting capability

Lotko, William, Dartmouth College, Magnetotail-Ionosphere coupling in fast flow channels

McComas, Dave, SwRI, A broad range of discoveries and a new orbit

McNutt, R.L., Jr., Johns Hopkins University Applied Physics Laboratory, The

MESSENGER Mission: 325 Orbits of Mercury and Counting
Malaspina, David, CU/LASP, Two-spacecraft observations of magnetic discontinuities
Mankoff, Ken, UC/Santa Cruz, Displaying Data on Google Mars
Mattes, Katja, University of Potsdam, Multi-model comparisons of the sensitivity of the atmospheric response to the SORCE solar irradiance data set

Osterloo, Mikki, CU/LASP, Mars chloride-bearing materials: signatures of aqueous environments
Possel, William, CU/LASP, Mission Operations at CU/LASP: Developing the next generation of space professionals
Stewart, Glen, CU/LASP, Dynamical surprises in Saturn's rings
Wilder, Frederick, ASTRA/LASP, Non-conjugate dayside convection under northward interplanetary magnetic field

***Scientific Legacy of the Solar Mesosphere Explorer (SME), 1981-1989
(A special event held at LASP October 6 and 7 to Recognize the Solar Mesosphere Explorer Project)***

Presentations:

Garcia, R., ACD/NCAR, Scientific legacy of SME
Olivero, John, Embry-Riddle Univ., SME, LASP, and a wonderful sabbatical year
Roble, Ray, HOA/NCAR, Nitric oxide from SME: How modeling studies have benefitted
Rottman, Gary, CU/LASP, Contributions of SME to the study of solar irradiance, Scientific Legacy of the Solar Mesosphere Explorer, 1981-1989
Rusch, David, NASA HQ, Contributions of SME to the study of ozone
Siskind, David, NRL, Nitric oxide from SME and the role of soft X-rays; perspective of a graduate student
Solomon, Stan, CU/ATOC, SME observations of solar proton event chemistry
The, Wai-Leong, CU/LASP, Improving Two-dimensional Hall MHD reconstruction of a reconnection event in the magnetotail
Thomas, Gary, CU/LASP, SME contributions to the study of Polar Mesospheric Clouds
Tobiska, Kent, Space Environment Technologies (SET), Contributions of SME to the study of solar irradiance; perspective of a graduate student
Zawodney, Joseph, NASA/Langley, SME observations of volcanic aerosols, and contributions to aerosol research; perspectives of a graduate student

Additional participants:

Bell, Tim
David, Randal
Hecht, Josh
Lawrence, George
Mount, George
Sparn, Tom
Willis, Paul

Publications

- Albers, N., et al., Saturn's F ring as seen by Cassini UVIS: Kinematics and statistics, *Icarus*, 217, 367-388, 2011.
- Auguston, K., et al., Modeling the near-surface shear layer: Diffusion schemes studied with CSS, *J. Phys., Conf. Series*, 271, 2011.
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- Baker, D.N., Overview of the Solar and Space Physics Program and the NRC Decadal Survey", National Research Council, Washington, DC, 12 April 2011.
- Baker, D.N., The NRC Decadal Survey in Solar and Space Physics: Space Weather Goals and Objectives, Space Weather Workshop, Boulder, CO, 26-29 April 2011.
- Baker, D.N., Space Weather and the next Solar and Space Physics Decadal Survey, Space Weather Workshop, Boulder, CO, 26-29 April 2011.
- Baker, D.N., The Impacts of Space Weather on Society and the Economy, LWS/SDO Workshop, Squaw Valley, CA 1-5 May 2011.
- Baker, D.N., The Economic and Societal Impacts of space weather, Invited Plenary Review, LWS/SDO Workshop, Squaw Valley, CA 1-5 May 2011.
- Baker, D.N., Mercury space environment: March-May 2011, Solicited

- talk, MESSENGER Science Working Meeting, Carnegie Institution, Washington, DC, 10 May 2011.
- Baker, D.N., Particle acceleration, transport, and precipitation loss at Mercury, Solicited talk, MESSENGER Science Working Meeting, Carnegie Institution, Washington, DC, 10 May 2011.
- Baker, D.N., Accelerated particles in the magnetosphere, Invited Overview, International Space Science Institute (ISSI), Bern, Switzerland, 16 May 2011.
- Baker, D.N., Coupling Research and Education: NSO in Boulder, Invited talk, National Solar Observatory, Sunspot, NM, 26 May 2011.
- Baker, D.N., Coupling Research and Education: NSO in Boulder, Invited talk, National Solar Observatory, Tucson, AZ, 27 May 2011.
- Baker, D.N., CISM Knowledge Transfer, Invited presentation, NSF Site Visit, Boston University, Center for Space Physics, Boston, MA, 31 May 2011
- Baker, D.J., and D.N. Baker, "Impediments to Interagency cooperation," Invited presentation, Executive Office of the President, Washington, DC, 7 June 2011.
- Baker, D.N., Assessing Solar and Solar-Terrestrial Influences as a Component of Earth's Climate Change Picture, IUGG, Melbourne, Australia, 27 June – 8 July 2011.
- Baker, D.N., A remarkable natural experiment: The extremely quiet Sun (2007-2009) and its effect on Earth's radiation belts, IUGG, Melbourne, Australia, 27 June – 8 July 2011.
- Baker, D.N., Studying changes of energetic particle properties in the Earth's radiation belts using the SAMPEX and POLAR missions, AGU Chapman Conference, St. John's Newfoundland, Canada, 17-22 July 2011.
- Baker, D.N., Assessing solar and solar-terrestrial influences on Earth's climate change, Workshop on Radiation-atmosphere (NOx) coupling, St. John's Newfoundland, Canada, 23-24 July 2011.
- Baker, D.N., Effects of hostile space weather on satellite operations, IEEE, Long Beach, CA, 14-19 August 2011.
- Baker, D.N., Assessing Solar and Solar-Terrestrial influences as a component of Earth's climate change picture, The Effects of Solar Variability on Earth's Climate: A Workshop, Boulder, CO, 8-10 September 2011.
- Baker, D.N., Solar and Space Physics at LASP, Chancellor's Celebration of Donors, Univ. of Colorado, Boulder, CO, 8 September 2011.
- Baker, D.N., Solar variability effects on Earth's climate workshop, Chancellor's Celebration of Donors, Univ. of Colorado, Boulder, CO, 8 September 2011.
- Baker, D.N., Solar and Solar-Terrestrial influences in Earth's climate picture, Chancellor's Celebration of Donors, Univ. of Colorado, Boulder, CO, 8 September 2011.
- Baker, D.N., The role of substorms and storms in radiation belt space weather events, ICSSSW, Hangzhou, China, 18-23 September 2011.

- Baker, D.N., MMS SOC and Science Planning, MMS SW meeting, University of New Hampshire, 28 September 2011.
- Baker, D.N., The impacts of space weather on society and the economy, Argonne National Laboratory, Chicago, IL, 30 September 2011.
- Baker, D.N., Reflections on 30th Anniversary of SME, Boulder, CO, 6 October 2011.
- Baker, D.N., National Science Foundation Directorate for Geosciences (GEO), Advisory Committee for Geosciences, Geospace Committee of Visitors 2011 Report, Arlington, VA, 14 October 2011.
- Baker, D.N., Historical perspective discussion, RBSP Science Working Group meeting, Applied Physics Laboratory, Johns Hopkins University, Laurel, MD, 20 October 2011.
- Baker, Daniel, MESSENGER at Mercury: Exploring the Sun's Nearest Neighbor from Orbit, APS Seminar, U. of Colorado, Boulder, 24 October, 2011.
- Baker, D.N., Solar wind drivers of space weathering, AMDG Science Team Meeting, Annapolis, MD 9 November 2011.
- Baker, D.N., LASP and Natural Hazard Concerns, Near Earth Objects: Media/Risk Communications Working Group, Boulder, CO, 14 November 2011.
- Baker, D.N., Space Physics, Space Weather, and Space Policy, Invited lecture, ASTR 4800 Class (Prof. J. Barns), U. of Colorado Boulder, 30 November 2011.
- Baker, D.N., Energetic particles, plasma waves, and the NASA Radiation Belt Storm Probes (RBSP) mission: The space weather connection, Fall AGU Meeting, San Francisco, CA, 5-9 December 2011.
- Baker, D.N., CISM Knowledge Transfer Group: Building real-time analysis and prediction tools for the CMIT models, Fall AGU Meeting, San Francisco, CA, 5-9 December 2011.
- Baker, D.N., On the mythical relation between solar wind speed and radiation belt electrons, Fall AGU Meeting, San Francisco, CA, 5-9 December 2011.
- Baker, D.N., Structure of Mercury's magnetosphere during MESSENGER's first three months in orbit, Fall AGU Meeting, San Francisco, CA, 5-9 December 2011.
- Baker, D.N., NASA Improving the Forecast: The causes and impacts of space weather, Fall AGU Meeting, San Francisco, CA, 5-9 December 2011.
- Baker, D.N., G. Poh, et al., Predicting solar wind forcing at Mercury: WSA-ENLIL model results, Fall AGU Meeting, San Francisco, CA, 5-9 December 2011.
- Baumgarten, G., et al., Middle atmosphere Doppler lidar and aerosol observations on scales down to seconds, Fall AGU Meeting, San Francisco, CA, 5-9 December 2011.
- Bechtel, H.A., et al., FTIR analysis of aerogel keystone from the Stardust interstellar dust collector: Assessment of terrestrial organic contamination and X-ray microprobe beam

- damage, Lunar and Planetary Institute Science Conference, 2011.
- Benze, S., C.E. Randall, et al., On the onset of polar mesospheric clouds as observed by SBUV, LPNR, Blacksburg, VA, October 2011.
- Brain, D.A., Aurora in Martian mini-magnetospheres, AGU Chapman Conference on Relationship Between Auroral Phenomenology and Magnetospheric Processes, 28 February 2011.
- Brain, D.A., et al., ARTEMIS spacecraft observations of lunar magnetic anomalies at low altitude, Fall AGU Meeting, San Francisco, CA, 5-9 December 2011.
- Brain, D.A., and N. Schneider, Discoveries in Planetary Sciences: Slide sets highlighting new advances for astronomy educators, EPSE-DPS Joint Meeting 2011, Nantes, France, 2-7 October, 2011.
- Brakebusch, M., C.E. Randall, et al., Evaluation of WACCM simulations of winter 2004-2005 Arctic ozone, SCRP, Denver, CO, October 2011.
- Burger, M.H., et al., Calcium in Mercury's Exosphere: Modeling MESSENGER data, Fall AGU Meeting, San Francisco, CA, 5-9 December 2011.
- Carstens, J.N., et al., Gravity waves and ozone perturbations near the stratopause observed from the CIPS instrument, LPMR, Blacksburg, VA, October, 2011.
- Carstens, J.N., et al., Observations of gravity waves and ozone structures near the stratopause from the CIPS instrument, Fall AGU Meeting, San Francisco, CA, 5-9 December 2011.
- Cartwright, M.L., et al., Multi-year investigation of flux ropes in the Martian ionosphere, Fall AGU Meeting, San Francisco, CA, 5-9 December 2011.
- Cassidy, T.A., A. Hendrix, and C. Paranicas, Far UV reflectance of Tethys, Cassini Maps workshop, Annapolis, MD, 2011.
- Cassidy, T.A., et al., Ion flux on Ganymede, Fall AGU Meeting, San Francisco, CA, 5-9 December 2011.
- Coddington, O.M., P. Pilewskie, and T. Vukicevic, Quantifying the information content of hyperspectral cloud data, Optical Society of America, Toronto, 5-9 July 2011.
- Curry, S., et al., Model comparison of oxygen ion loss at Mars, Fall AGU Meeting, San Francisco, CA, 5-9 December 2011.
- Curry, S., et al., Sources of polar plume ion escape on Mars, EPSE-DPS Joint Meeting, Vol. 6, Abstract EPSC-DPS2011-267, 2011.
- Dalton, J.B., et al., Surface effects of endogenic and exogenic processes on Europa, EPSC-DPS Joint Meeting, 2011.
- Delamere, P.A., et al., Kelvin-Helmholtz instability at Saturn's magnetopause: Cassini Ion data analysis and hybrid simulation, Magnetospheres of the outer planets, Boston, July 2011.
- Delamere, P.A., and F. Bagenal, Solar wind interaction with the giant magnetospheres, Chapman Conference on Auroral Processes at Earth

- and other Planets, Fairbanks, AK, March 2011.
- Delamere, P.A., Satellite-induced electron acceleration and related auras, AGU Chapman Conference, Fairbanks, AK, February 2011.
- Delamere, P.A., et al., Saturn's interaction with the solar win: Clues from the thermal ion properties on the dawn flank, Fall AGU Meeting, San Francisco, CA, 5-9 December 2011.
- Delamere, P.A., et al., Saturn's interaction with the solar win: Clues from the thermal ion properties on the dawn flank, University of Alabama Huntsville, Physics Department Seminar, Huntsville, AL, 2011.
- Delamere, P.A., Satellites and interactions, Magnetospheres of the outer planets Meeting, Boston, MA, 2011.
- Desroche, M., et al., The Interaction between the solar wind and Jupiter's magnetosphere, Magnetospheres of the outer planets, Boston, July 2011.
- Desroche, J.J., et al., A comparison of the interaction of the solar wind with the Jovian and Kronian magnetospheres, Fall AGU Meeting, San Francisco, CA, 5-9 December 2011.
- Dols, V., Model of Io's local interaction: A coupled Hall-MHD/Multi-species chemistry model, Magnetospheres of the Outer Planets Meeting, Boston, MA, 2011.
- Dols, V., et al., Model of Io's local interactions: A coupled Hall-MHD/Multi-species chemistry model, Fall AGU Meeting, San Francisco, CA, 5-9 December 2011.
- Dong, C., et al., A framework for establishing the feedback between the M-GITM and the multi-fluid MHD models, CEDAR-GEM Joint Workshop, Santa Fe, NM, 2011.
- Dove, A., et al., Characterization of a laboratory simulated lunar photoelectron sheath, 42nd LPS Conference, 7-11 March 2011.
- Drake, K.J., et al., Secondary ejecta from hypervelocity dust impacts, Fall AGU Meeting, San Francisco, CA, 5-9 December 2011.
- Elkington, S.R., and J.P. McCollough, Radiation belt loss processes and the depletion associated with the minimum of Solar Cycle 24, NASA Workshop on Causes and Consequences of the Recent Solar Minimum, HAO/NCAR, May 2011.
- Elkington, S.R., J.P. McCollough, and S.G. Claudepierre, Sources and Effects of Pc1 and Pc5 ULF waves on Earth's trapped radiation environment, NOAA Space Weather Prediction Center, May 2011.
- Elkington, S.R., A.A. Chan, and X. Tao, Radial transport as a function of azimuthal ULF wave distributions, AGU Chapman Conference on "Dynamics of the Earth's Radiation Belts and Inner Magnetosphere", St. Johns, Newfoundland, 2011.
- Elkington, S.R., W.K. Peterson, and J.P. McCollough, Contribution of ionospheric oxygen to the near-Earth plasmashet during geomagnetically quiet conditions, IUGG/IAGA meeting, Melbourne, Australia, 2011.
- Elkington, S.R., Test particles simulations of trapped energetic particles: postprocessing and interpreting results, CISM All-Hands Meeting, Jackson, WY, 2011.

- Elkington, S.R., Stuff we're working on: Plasma distributions and magnetospheric wave activity, RBSP-ECT team meeting, Redondo, CA, 2011.
- Elkington, S.R., et al., EMIC wave growth: Contrasting energizing and non-energizing sources of anisotropy in the ring current, Fall AGU Meeting, San Francisco, CA, 5-9 December 2011.
- Ergun, R.E., Parallel electric fields in Jupiter's aurora, AGU Chapman Conference (Relationship between auroral phenomenology and magnetospheric processes), Fairbanks, AK, 2011.
- Ergun, R.E., Electrostatic turbulence, parallel electric fields, and Alfvénic turbulence in the plasma sheet, Fall AGU Meeting, San Francisco, CA, 5-9 December 2011.
- Ergun, R.E., Double layers and electron phase-space holes on auroral field lines, Fall AGU Meeting, San Francisco, CA, 5-9 December 2011.
- Eriksson, S., et al., THEMIS-C observations of ion and electron velocity signatures within solar wind reconnection exhausts, CIPS, CU/Boulder, 11 February 2011.
- Eriksson, S., et al., THEMIS-C observations and Walen predictions of ion and electron velocity signatures within solar wind reconnection exhausts, Sonnerup Symposium, Hanover, NH, 2011.
- Eriksson, S., et al., A statistical THEMIS analysis of vortex-induced magnetic islands at the flank magnetopause, IUGG 2011, Melbourne, Australia, 2011.
- Eriksson, S., et al., THEMIS-C observations of ion and electron velocity signatures within solar wind reconnection exhausts, IUGG Melbourne, Australia, 2011.
- Eriksson, S., et al., Alfvén Mach number and IMF clock angle dependencies of sunward directed ExB flow channels, Joint CEDAR-GEM Workshop, Santa Fe, NM, 2011.
- Espejo, J., et al., A Hyperspectral imager for high radiometric accuracy earth climate studies, SPIE, Aug 2011.
- Fang, X., 3-D Mars pickup ion transport model, MAVEN Project Science Group Meeting, Greenbelt, MD, 2011.
- Fang, X., et al., Global pickup oxygen ion precipitation in the Martian thermosphere: Distributions, effects, and implications, Eos Trans. AGU, 92(52), Fall Meeting Supplement, Abstract SA11A-01, San Francisco, CA, 2011.
- Fehlmann, A., et al., Fourth world radiometric reference to SI radiometric scale comparison and implications to on-orbit measurements of the total solar irradiance, NEWRAD, Sept 2011.
- Fehlmann, A., et al., PREMOS absolute radiometer calibration and implications to on-orbit measurements of the total solar irradiance, Fall AGU Meeting, San Francisco, CA, 5-9 December 2011.
- Fiege, K., et al., Calibration of the CDA with silicate dust analogues, EPSC-DPS Joint Meeting Oct 2011, Nantes, France.
- Fillingim, M., et al., Goldilocks and the Three Planets, Earth and Space Sci-

- ence: Making connections in education and public outreach, Astron. Soc. of the Pacific Conference, Boulder, CO, 2011
- Fillingim, M.O., et al., Visualizing planetary magnetic fields (and why you should care), Fall AGU Meeting, San Francisco, CA, 5-9 December 2011.
- Finsterle, W., et al., Characterization of the DARA Solar Absolute Radiometer, Fall AGU Meeting, San Francisco, CA, 5-9 December 2011.
- Finsterle, W., et al., The TIM-to-WRR comparison, SORCE Science Meeting, Sept 2011.
- Fleshman, B.L., et al., Modeling the ion abundances in Saturn's inner magnetosphere, Fall AGU Meeting, San Francisco, CA, 5-9 December 2011.
- Fleshman, B.L., et al., the roles of dissociation and velocity-dependent charge exchange in Saturn's extended neutral clouds, Magnetospheres of the outer planets, Boston, July 2011.
- Floss, A., et al., Stardust interstellar foils I1061N,I and I1031N,I: First results from automated crater searches and future analytical possibilities, Lunar and Planetary Institute Science Conference, 2011.
- Fontenla, J., Recent progress on EUV solar spectral irradiance modeling and forecasting, NADIR Workshop, Boulder, CO, 2011.
- Fontenla, J., Modeling & Forecasting UV Solar Irradiance, NOAA Seminar, Boulder, CO, 2011.
- Fontenla, J., Far-side imaging tools, front-side imaging, and EUV solar irradiance forecasting, Fall AGU Meeting, San Francisco, CA, 5-9 December 2011.
- Fontenla, J., Modeling UV solar irradiance, SDO Workshop, Lake Tahoe, CA, 2011.
- Fontenla, J., Stratospheric effects of solar spectral irradiance variations, 33rd Review of Atmospheric Transmission Models Meeting, Lexington, MA, 2011.
- Georgiev, G.T., et al., Assessment of multiangular polarization contribution to the bidirectional reflectance of natural samples, International Geoscience and Remote Sensing Symposium, Vancouver, Canada, 2011.
- Gosling, J.T., The solar wind and heliosphere: A brief overview, Workshop on the Causes and Consequences of the Minimum of Solar Cycle 24, NCAR, Boulder, CO, 2011.
- Gosling, J.T., The Solar Wind, REU Lecture, LASP, Boulder, CO, 2011.
- Gosling, J.T., Structure and Evolution of the Three Dimensional Solar Wind, Heliophysics Summer School, NCAR, Boulder, CO, 2011.
- Gosling, J.T., A retrospective on magnetic reconnection in the solar wind, International Astrophysics Conference, Maui, HI, March 2011.
- Gosling, J.T., Magnetic reconnection in the solar wind: A retrospective, Friends of the Magnetosphere Seminar, LASP, Boulder, CO, April 2011.
- Gosling, J.T., Magnetic Reconnection in the Solar Wind: An Overview, ESLAB 2011/ Cluster 21 Symposium, Belgium, 2011.

- Gosling, J.T., Pulsed, torsional, and reconnection-associated Alfvén waves in the Solar Wind, Imperial College Seminar, London, UK, 2011.
- Gosling, J.T., Bengt Sonnerup and magnetopause reconnection, Bengt Sonnerup Symposium, Dartmouth College, Hanover, NH, 2011.
- Gosling, J.T., Pulsed Alfvén waves in the solar wind, Fall AGU Meeting, San Francisco, CA, 5-9 December 2011.
- Greer, K., J. Thayer, and V.L. Harvey, A climatology of temperature enhancements near the polar stratopause, CEDAR Workshop, Santa Fe, NM, 2011.
- Greer, K., et al., Dynamical mechanisms associated with polar winter stratopause warmings, Fall AGU Meeting, San Francisco, CA, 5-9 December 2011.
- Grün, E., et al., A Nano-Dust Analyzer on the Moon, Fall AGU Meeting, San Francisco, CA, 5-9 December 2011.
- Hanssen, L., et al., Infrared cavity radiometer reflectometry in support of total solar irradiance instruments, Fall AGU Meeting, San Francisco, CA, 5-9 December 2011.
- Harder, J.W., et al., Measured and modeled trends in solar spectral irradiance variability and application to Earth Atmospheric Studies, HAO/NCAR, Boulder, CO, March 2011.
- Harder, J.W., et al., Measured and modeled trends in solar spectral irradiance variability and application to earth atmospheric studies, IAMAS, Melbourne, Australia, June 2011.
- Harder, J.W., et al., Measured and modeled trends in the solar spectral irradiance variability using the SORCE SIM and SOLSTICE instruments, Fall AGU Meeting, San Francisco, CA, 5-9 December 2011.
- Harder, J.W., et al., The impact of solar spectral irradiance variability on middle atmospheric ozone, SORCE meeting, Sedona, AZ, 2011.
- Harvey, V.L., et al., WACCM studies at CU-Boulder, WACCM Working Group meeting, Boulder, CO, 18 February 2011.
- Harvey, V.L., Mesospheric transport in WACCM, HAO Colloquium, 30 March 2011.
- Hendrix, A., et al., The Ultraviolet albedo patterns of Mimas and Tethys, Fall AGU Meeting, San Francisco, CA, 5-9 December 2011.
- Hendrix, A., et al., Ganymede: The ultraviolet albedo and weathering effects, Fall AGU Meeting, San Francisco, CA, 5-9 December 2011.
- Hendrix, A., et al., Weathering effects on the icy Saturnian moons: UVIS results, EPSC-DPS Joint Meeting, 2011.
- Hess, S., et al., Internal magnetic field model deduced from the satellite induced aurora observations, Chapman Conference on Auroral Processes at Earth and other planets, Fairbanks, AK, March 2011.
- Hess, S., et al., Longitudinal modulation of hot electrons in the Io plasma torus, Magnetospheres of the outer planets, Boston, July 2011.

- Hillier, J.K., et al., Impact ionization mass spectra of mineral micro-particles, EPSC-DPS Joint Meeting Oct 2011, Nantes, France.
- Himes, Caroline, Partnering with Universities – Everything You Need to Know!, Export and Licensing Requirements for Space-Based Programs Conference, November 9-11, 2011.
- Ho, G.C., D.N. Baker, et al., Transient bursts of energetic electrons in Mercury's magnetosphere observed by MESSENGER, Fall AGU Meeting, San Francisco, CA, 5-9 December 2011.
- Holsclaw, G., et al., Disk-integrated polarization of the Moon in the ultraviolet from SORCE SOLSTICE, LPSC, Houston, TX, 2011.
- Holt, L., C.E. Randall, et al., An evaluation of tracer-derived descent rate using model and observational results, HEPPA 2011, Granada, Spain, 12 May 2011.
- Holt, L., C.E. Randall, et al., Gravity waves in WACCM with respect to transport of Nox created by energetic particle precipitation, CEDAR, June 2011.
- Holt, L., C.E. Randall, et al., Gravity waves in WACCM with respect to transport of Nox created by energetic particle precipitation, WCRP, Denver, CO, October 2011.
- Holt, L.A., et al., Transport of NOx created by energetic particle precipitation from the mesosphere-lower thermosphere to the stratosphere, World Climate Research Programme, Denver, CO, 2011.
- Horanyi, M., et al., Dust tomography of the heliosphere, EGU General Assembly, Vienna, Austria, 2011.
- Horanyi, M., et al., LDEX+: Lunar dust experiment with chemical analysis capability to search for water, 42nd LPS Conference, 7-11 March, 2011.
- Horanyi, M., Physics of the Lunar surface, Colorado State University, Colorado Springs, September 2011.
- Horanyi, M., et al., Dust measurement by the Student Dust Counter onboard the New Horizons mission, EPSC-DPS Joint Meeting, Nantes, France 2-7 October 2011.
- Horanyi, M., et al., NASA Lunar Science Institute: Colorado Center for Lunar Dust and Atmospheric Studies, LPI Contributions, 1646, 30-, 2011.
- Horanyi, M., et al., iDUST: A mission concept for the 'dust tomography' of the heliosphere, EPSC-DPS Joint Meeting, Nantes, France 2-7 October 2011.
- Horanyi, M., et al., The lunar surface: A dusty plasma laboratory, Fall AGU Meeting, San Francisco, CA, 5-9 December 2011.
- Horanyi, M., Solar wind plasma and UV effects on surfaces in space, Fall AGU Meeting, San Francisco, CA, 5-9 December 2011.
- Horanyi, M., et al., The dust accelerator facility of the Colorado Center for Lunar Dust and Atmospheric Studies, 6th International Conference on Physics of Dusty Plasmas, Germany, 2011.
- Howarth, A., et al., In-transit thermal ionospheric oxygen (O+) ions between the ionosphere and the

- plasma sheet and ring current, Fall AGU Meeting, San Francisco, CA, 5-9 December 2011.
- Hsu, H.-W., et al., Spacecraft and dust charging at Enceladus, EPSC-DPS Joint Meeting, Nantes, France 2-7 October 2011.
- Hsu, H., et al., Spacecraft and dust charging at Enceladus, Fall AGU Meeting, San Francisco, CA, 5-9 December 2011.
- Jakosky, B., The 2013 MAVEN mission to Mars, Fall AGU Meeting, San Francisco, CA, 5-9 December 2011.
- Jakosky, B., The 2013 MAVEN mission to Mars, Mars Atmosphere Workshop, Paris, 2011.
- Jakosky, B., The 2013 MAVEN mission to Mars, DPS Conference, Nantes, France, 2011.
- Johnson, R.E., et al., Magnetospheric plasma effects on the icy satellites, Fall AGU Meeting, San Francisco, CA, 5-9 December 2011.
- Jolitz, R., et al., Monte Carlo model of high energy ion precipitation in the Martian atmosphere, Fall AGU Meeting, San Francisco, CA, 5-9 December 2011.
- Jones, A.R., Solar Dynamics Observatory: The first year, UNH Colloquium, April 2011.
- Jones, A.R., et al., Developing real-time space weather products using SDO-EVE-ESP data, Boulder Solar Days, March 2011.
- Jones, A.R., Solar EIV instrument overview: Solar EUV Irradiance Inter-Calibration and Validation Workshop, LASP, 2011.
- Jones, A.R., et al., GOES-NOP-EUV Sensors calibration, Solar EUV Irradiance Inter-Calibration and Validation Workshop, LASP, 2011.
- Jones, A.R., et al., SOHO-CDS Instrument, Solar EUV Irradiance Inter-Calibration and Validation Workshop, LASP, 2011.
- Juhász, A., M. Horányi, and S. Kempf, Dust capture from Phoebe to Saturn's magnetosphere, Fall AGU Meeting, San Francisco, CA, 5-9 December 2011.
- Kalnajs, L.E., In situ measurement of ozone depletion in the Antarctic ozone hole during the Condordiasi super pressure balloon project, Univ. of Wyoming, February 2011.
- Kalnajs, L.E., The first, long-term, in situ measurement of ozone depletion in the Antarctic ozone hole, AMS, Seattle, WA 2011.
- Kalnajs, L.E., Instrumentation for long duration Antarctic ballooning and its application to surface measurements, Polar Technology Conference, Albuquerque, NM, 24-25 February 2011.
- Kanekal, S.G., and D.N. Baker, Studying changes or energetic particle properties in the Earth's radiation belts using the SAMPEX POLAR, and Cluster missions, Fall AGU Meeting, San Francisco, CA, 5-9 December 2011.
- Kanekal, S.G., and D.N. Baker, Relativistic electron losses by microbursts and their relationship to flux decay time scales, Fall AGU Meeting, San Francisco, CA, 5-9 December 2011.
- Karlsson, B., C.E. Randall, and T. Shepherd, On the onset of polar mesospheric clouds and the breakdown of the stratospheric polar vortex in the southern hemisphere, LPMR, Blacksburg, VA, October 2011.

- Kempf, S., et al., The structure of Saturn's E ring as seen by Cassini, EPSC-DPS Joint Meeting, Nantes, France 2-7 October 2011.
- Kempf, S., et al., The Phoebe dust ring as seen by the Cassini dust detector CDA, Fall AGU Meeting, San Francisco, CA, 5-9 December 2011.
- Kempf, S., et al., Impact ionization spectra of cosmic dust analogues, Fall AGU Meeting, San Francisco, CA, 5-9 December 2011.
- Kindel, Bruce, Hyperspectral measurements and modeling of the Earth's atmosphere, NASA Ames Research Center.
- King, M.D., Advances in the remote sensing of cloud optical properties, Workshop on Observations and Modeling of Aerosol and Cloud Properties for Climate Studies, Paris, France, 2011.
- Kinnison, D., S. Tilmes, M. Brakebusch, and C.E. Randall, Polar heterogeneous process in WACCM: A new approach, CESM workshop, Breckenridge, CO, June 2011.
- Kopp, G., An improved total solar irradiance climate data record, Fall AGU Meeting, San Francisco, CA, 5-9 December 2011.
- Kopp, G., Solar irradiance and climate, 3rd Santa Fe Conference on Global and Regional Climate Change, Oct 2011.
- Kopp, G., Why didn't you calibrate that?: Lessons learned from TSI, Solar EUV Irradiance Inter-calibration and validation workshop, Oct. 2011.
- Kopp, G., Overview and advances in solar radiometry for climate studies, NRC/SSB, Sept. 2011.
- Kopp, G., Radiance measurements for climate studies, Rocky Mountain Optical Society of America, Nov. 2011.
- Kopp, G., TSI instrument validations on the TSI radiometry facility, Fall AGU Meeting, San Francisco, CA, 5-9 December 2011.
- Kopp, G., et al., Total solar irradiance data record accuracy and consistency improvements, NEWRAD, Sept 2011.
- Kopp, G., Status of the total solar irradiance climate data record, SORCE Science Meeting, Sept 2011.
- Kozyra, J.U., et al., Magnetosphere response to high-speed solar wind streams, IAGA, Melbourne, Australia, July 2011.
- Krueger, H., et al., The mass distribution of interstellar dust in the heliosphere from in-situ measurements, EPSE-DPS Joint Meeting, 2011.
- LeBlanc, S., S. Schmidt, and P. Pilewskie, Aircraft measurements of the aerosol direct radiative effect, HISE, Toronto, 5-9 July 2011.
- Lewis, M.C., and G.R. Stewart, Negative diffusion over many synodic periods, Division of Dynamical Astronomy Meeting, Austin, TX, April 2011.
- Li, Xinlin, On the mythical relation between solar wind speed and radiation belt electrons, Fall AGU Meeting, San Francisco, CA, 5-9 December 2011.
- Li, X., CubeSat: Colorado Student pace Weather Experiment (CSSWE), APL, Maryland, 24 May 2011.
- Li, X., CubeSat: Colorado Student pace Weather Experiment (CSSWE), GEM Workshop, Santa Fe, NM, June 2011.
- Li, X., Different behavior of MeV electrons at Geosynchronous orbit during different phases of the solar cy-

- cle, GEM Workshop, Santa Fe, NM, June 2011.
- Li, X., High speed solar wind: Neither sufficient nor necessary for enhancements of MeV electrons at GEO, GEM Workshop, Santa Fe, NM, June 2011.
- Li, X., High V_{sw} : Neither sufficient nor necessary, some geomagnetic activity is required, NASA/RBSP/ECT Science Working Group, Redondo Beach, CA, October 2011.
- Li, X., Adiabatic effect on radiation belt electrons at low altitude, IUGG, Melbourne, Australia, July 2011.
- Li, X., Radiation belt electrons in the magnetosphere, Workshop on Inner Magnetosphere Dynamics, Beijing, China, May 2011.
- Li, X., Behavior of MeV electrons at geosynchronous orbit during the last two solar cycles: Renewed understanding, International Symposium: From Solar Storm to Geomagnetic Storm, Shanghai, China, May 2011.
- Likhanskii, A., et al., Plasma sheath at moon craters: From sunrise to sunset, 42nd LPS Conference, 7-11 March, 2011.
- Lillis, R.J., M.O. Fillingim, and D.A. Brain, Three-dimensional structure of the Martian nightside ionosphere, EPSE-DPS Joint Meeting 2011, Nantes, France, 2-7 October, 2011.
- Lillis, R.J., M.O. Fillingim, and D.A. Brain, Three-dimensional structure of the Martian nightside ionosphere, Fall AGU Meeting, San Francisco, CA, 5-9 December 2011.
- Lukancic, K., et al., Can coronal dimmings be used to forecast CMEs?, Fall AGU Meeting, San Francisco, CA, 5-9 December 2011.
- McClintock, W.E., et al., Insights into the nature of Mercury's exosphere: Early results from the MESSENGER orbital mission phase, EPSC-DPS Joint Meeting, Nantes, France, October 2011.
- McClintock, W.E., et al., Exploring Mercury's surface-bound exosphere: AN overview of observations during the MESSENGER orbital phase, Fall AGU Meeting, San Francisco, CA, 5-9 December 2011.
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- Malaspina, D.M., Observation and modeling of Langmuir waves at 1 AU, CIPS seminar, Univ. of Colorado, 2011.
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- Platnick, S., et al., Overview of the MODIS collection 6 optical property algorithm, 3rd Cloud Parameter Retrieval Workshop, Madison, WI, 2011.
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- Rast, M., Boundary condition sensitivity in solar convection experiments, ICiS 2011 Workshop: Verification, Validation and Uncertainty Quantification Across Disciplines, Park City, UT, 10 August 2011.
- Rast, M., Transport statistics in stirred point-vortex flows, 3rd International Conference on Turbulent Mixing and Beyond, Trieste, Italy, 26 August 2011.
- Rast, M., A two-dimensional model of 3D turbulence, ISIMA2011, Beijing, China, 1 July 2011.
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- Rast, M., Steps toward a mixed Eulerian-Lagrangian turbulent transport model, Collaborative for Fluid and Energy Sciences, Boulder, CO, 1 April 2011.
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- Snow, M., SOLSTICE I and II degradation corrections, NIST workshop on SSI trends, 2011.
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- Snow, M., and E. Wood, The REU Summer School, NASA Helio Faculty Workshop, 2011.
- Snow, M., Beyond Boulder, Boulder Solar Alliance REU program, 2011.
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- Snow, M., LYRA validation with SOLSTICE: Guest Investigator Final Report, PROBA2 Science Center, Brussels, Belgium, 2011.
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- Snow, M., Rotational variability in the ultraviolet over three solar cycles, SORCE Science meeting, Sedona, AZ, 2011.
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- Snow, M., W. McClintock, and G. Holsclaw, Update on SOLSTICE Solar, Stellar, and Lunar Datasets for FONDUE, ISSI Working Group, Bern, Switzerland, 2011.

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- Sternovsky, Z., Revisiting the Moon: Detection and analysis of lunar dust, Dept. of Meteorology, Stockholm University, Stockholm, Sweden, 26 September 2011.
- Sternovsky, Z., Dust detection in space, University of Oslo, Andoya Rocket Range, Norway, 5 October 2011.
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