

Earth's Radiative Energy Budget

4th Annual SORCE Science Meeting
September 20-22, 2006, San Juan Islands, Washington

Meeting Agenda

Tuesday, September 19

5:30 p.m. Welcome Reception

Wednesday, September 20, morning

Welcome: Tom Woods, LASP, University of Colorado, Boulder

Session 1: *SORCE Contributions to Earth's Radiative Energy Budget*

Tom Woods (Invited), LASP, University of Colorado, Boulder
Overview of the SORCE Mission and its Future

Greg Kopp (Invited), LASP, University of Colorado, Boulder
TSI: The Incoming Side of the Equation

Jerry Harder (Invited), LASP, University of Colorado, Boulder
The Role of VIS-IR / SIM in Climate Science

Bill McClintock (Invited), LASP, University of Colorado, Boulder
Solar Ultraviolet Irradiance and Its Variability

Marty Snow (Invited), LASP, University of Colorado, Boulder
The Role of Spectral Resolution in Measuring the Solar Magnesium II Index

Session 2: *Radiative Energy Budget*

Norm Loeb (Invited), NASA Langley Research Center, Hampton, VA
Determination of the Earth's Radiation Budget from CERES

Peter Pilewskie (Invited), LASP, University of Colorado, Boulder
Overview of the Radiation Budget in the Lower Atmosphere

Wednesday, September 20, afternoon

Ellsworth Dutton (Invited), NOAA, Earth System Research Laboratory, Boulder, CO
Surface Radiation Budget Observations: Progress and Challenges

Tom Ackerman (Contributed), Pacific Northwest National Lab, Washington; University of Washington
The Radiation Budget of an Atmospheric Column in the Tropical Western Pacific

Roger Davies (Contributed), University of Auckland, New Zealand
Constraints on the Inter-Annual Variation of Global and Regional TOA Radiation Budgets Inferred from MISR Measurements

Steven Dewitte (Contributed), Royal Meteorological Institute of Belgium, Brussels
Time-Space Complete Measurement of the Earth Radiation Budget

Tony Slingo (Invited), University of Reading, United Kingdom
Observations of the Earth's Radiation Budget from Geostationary Orbit and from the Surface

Poster Session / Reception

Thursday, September 21, morning

Session 3: Radiative Forcings – Dedicated to Yoram Kaufman

Robert Cahalan, NASA Goddard Space Flight Center, Greenbelt, MD
Tribute to Yoram Kaufman

Judith Lean (Invited), Naval Research Laboratory, Washington, DC
Solar Radiative Forcing

Roger Pielke Sr. (Invited), University of Colorado, Boulder
Regional and Global Climate Forcings – The Need to Move Beyond a Focus of the Radiative Forcing of the Well-Mixed Greenhouse Gases

Mark Weber (Contributed), University of Bremen, Germany
Solar Variability and its Links to Ozone-Climate Interaction

Bill Collins (Invited), National Center for Atmospheric Research, Boulder, CO
Radiative Forcing by Greenhouse Gases and its Representation in Global Models

Brian Cairns (Invited), Columbia University, New York, NY
Using Models and Measurements to Understand and Constrain the Direct Effect of Aerosols on Climate

Jim Coakley (Invited), Oregon State University, Corvallis
The Aerosol Indirect Effect

Antony Clarke (Contributed), University of Hawaii, Honolulu
An Ultrafine Sea-Salt Flux from Breaking Waves: Implications for CCN in the Remote Marine Atmosphere

Steven Lloyd (Contributed), APL, Johns Hopkins University, Laurel, MD
A 27-Year Composite Dataset of Global UV Effective Reflectivity from the TOMS and SBUV(2) Satellite Instruments

Thursday, September 21, afternoon

Session 4: Climate Responses and Feedbacks

KK Tung (Invited), University of Washington, Seattle
Climate Sensitivity from Atmosphere's Response to the Radiative Forcing of the 11-Year Solar Cycle, including Feedbacks

David Halpern (Invited), NASA Headquarters, Washington, DC
Ocean-Atmosphere Interfaces in Climate

Ferry to Friday Harbor, San Juan Island

SORCE Science Dinner, San Juan Island Yacht Club, Guest Speaker: Gary Rottman

Friday, September 22, morning

Robert Cahalan (Invited), NASA Goddard Space Flight Center, Greenbelt, MD
Three-Dimensional Cloud Properties and Climate

Ken Jezek (Invited), The Ohio State University, Columbus
The Ice Feedback

Steve Rumbold (Contributed), University of Reading, United Kingdom
Effect of the 11-Year Solar Cycle on Stratospheric Temperatures

Jose Rial and Ming Yang (Contributed), University of North Carolina at Chapel Hill
Solar Forcing and Abrupt Climate Change over the Last 100,000 Years

Dominique Crommelynck (Contributed), Royal Meteorological Institute of Belgium, Brussels
The Observation of the Earth Radiation Budget: A Set of Challenges

E. J. Zita (Contributed), The Evergreen St. College, Olympia, WA
Earth's Energy Balance: Climate Change Workshops

Meeting Summary: Tom Woods, LASP, University of Colorado, Boulder

Friday, September 22, afternoon

Optional Tour – Whale/Wildlife Excursion

Posters:

Subarna Bhattacharyya, Jawaharlal Nehru Centre for Advanced Scientific Research, Bangalore, India
A Wavelet Cross-Spectral Analysis of Solar/ENSO Connections with Indian Monsoon Rainfall

Antony Clarke, University of Hawaii, Honolulu
Biomass Burning and Pollution Aerosol over North America: Organic Components and Their Influence on Spectral Optical Properties and Humidification Response

Matt DeLand, Science Systems and Applications, Inc., Lanham, MD
Maintaining the Solar UV Database in the 21st Century

Frank Eparvier, LASP, University of Colorado, Boulder
How TIMED-SEE uses FUV data for validation and calibration

Juan Fontenla, LASP, University of Colorado, Boulder
The Solar Radiation Physical Modeling System

Claus Fröhlich, Physikalisch-Meteorologisches Observatorium Davos, World Radiation Center, Switzerland
Comparison of the WRC-85 Solar Spectral Irradiance with RSSVI and the SPM of VIRGO/SOHO

Barry Knapp, LASP, University of Colorado, Boulder
SORCE Solar Irradiance Data Products

Greg Kopp, LASP, University of Colorado, Boulder
Could You See an Earth-Type Planetary Transit of a Solar-Type Star? Another Use of TIM Data

Robert Kurucz, Harvard-Smithsonian Center for Astrophysics, Cambridge, MA
High Resolution Irradiance Spectrum from 300 to 1000 nm

Jeff Morrill, Naval Research Laboratory, Washington, DC
A Model of Long-Term Variability of Solar UV and EUV Irradiance

Julia Saba, Lockheed Martin, ATC Solar & Astrophysics Lab, Greenbelt, MD
Rapid Solar Cycle Onset – Potential New Climate Study Tool?

Marty Snow, LASP, University of Colorado, Boulder
The LASP Interactive Solar Irradiance Database (LISIRD)

Marty Snow, LASP, University of Colorado, Boulder
UARS and SORCE SOLSTICE Calibration and Comparisons

Mark Weber, University of Bremen, Germany
Solar UV/Vis/NIR Spectral Irradiance from SCIAMACHY and GOME

Guoyong Wen, NASA GEST and NASA GSFC, Baltimore, MD
Deriving Historical TSI Variations from Lunar Borehole Profiles