8:40 a.m. – 9:00 a.m.
The Devastating 27 April 2011 Tornado Outbreak: A Preliminary Scientific Assessment
Kevin Knupp, Ph.D. ‘85
Kevin Knupp is a professor in the Atmospheric Science Department at the University of Alabama in Huntsville. He has been engaged in research on cloud, mesoscale, and boundary layer processes while at UAH, utilizing mobile instrumentation such as the Mobile Integrated Profiling System (MIPS) and the Mobile Alabama X-band (MAX) dual polarization radar to conduct this experimental research. The common research theme of recent work over the past decade involves the interplay between severe/hazardous weather and the atmospheric boundary layer.

9:00 – 9:20
CSU to the Finish Line: A Career of Field Research
Robert Rauber, Ph.D. ‘85
Bob Rauber is a professor and head of the Department of Atmospheric Sciences at Urbana-Champaign. After receiving his Ph.D. from CSU in 1985, he spent two years working in the Sierra Nevada Mountains and then moved to Illinois where he has spent his entire career. He is a fellow of the American Meteorological Society.
9:20 – 9:40
Clouds from Satellites: from SMONEX to MODIS
Steve Ackerman, Ph.D. ’87
Steve Ackerman is currently a professor of Atmospheric and Oceanic Sciences and Director of the Cooperative Institute for Meteorological Satellite Studies at the University of Wisconsin-Madison. He was recently appointed Graduate School Associate Dean of the Physical Sciences. He received his Ph.D. in 1987 working with Dr. Stephen Cox after working as a research scientist with Prof. Cox on the Summer Monsoon Experiment.

9:40 – 10:00
Coffee break

10:00 – 10:20
The Myth of the 1970s Global Cooling Scientific Consensus: The Evolution of Integrated Climate Change Science
Thomas Peterson, Ph.D. ’91
Thomas C. Peterson is currently the Principal Scientist at NOAA’s National Climatic Data Center in Asheville, North Carolina. After earning his Ph.D. under Tom Vonder Haar in satellite climatology in 1991, he was hired by NCDC to build their global land surface data set from instrumental observations starting in 1697. He was a lead author on the IPCC Fourth Assessment Report, served as co-Chair and co-Editor-in-Chief of the 2009 report Global Climate Change Impacts in the United States, and in February of 2010 was unanimously elected President of the World Meteorological Organization’s Commission for Climatology.

10:20 – 10:40
Sprites, Halos, and Jets, Oh My! The Meteorology of Luminous Events in the Upper Atmosphere
Timothy Lang, Ph.D. ’01
Timothy Lang graduated with a physics bachelor’s degree from the University of San Diego in spring 1995, and started graduate work at CSU’s Department of Atmospheric Science that summer. After defending his Ph.D. at the end of 2000 he worked as a post-doc at Harvard University before returning to CSU as a research scientist in late 2002. Timothy lives in Fort Collins with his wife and three children.

10:40 – 11:00
Cloud Processes: Insights over a Decade into the Links between Storm Dynamics and Microphysics
Susan van den Heever, Ph.D. ’01
After obtaining her B. Sc. in math and her M.S. in climatology in South Africa, Susan C. van den Heever moved to Colorado State University in order to pursue her Ph.D. in atmospheric science under the supervision of Dr. Bill Cotton. Following her graduation in 2001, she spent several years as a post-doctoral student and research scientist before joining the faculty in ATS in 2008. Sue and her research group make use of numerical models and field campaign data to investigate various aspects of cloud microphysics and storm dynamics, with particular focus on the relationships between these processes, and she is a co-author of the book “Storm and Cloud Dynamics”.

11:00 – 11:20
Coffee break

11:20 – 11:40
Observations of Convectively Coupled Equatorial Waves: A Decade of Progress
Katherine Straub, Ph.D. ’02
Katherine Straub is currently an Associate Professor of Earth and Environmental Sciences at Susquehanna University in Selinsgrove, PA. She began working at Susquehanna in 2002, shortly after receiving her Ph.D. from CSU’s Department of Atmospheric Science under Wayne Schubert and George Kiladis (NOAA). Since 2003, Katherine and her husband Derek (CSU ATS Ph.D. ’02) have shared one full-time faculty position at Susquehanna.

11:40 – 12:00
Carbon Dreaming: Getting to Know Hummers, Tropical Leaves and Power Plants
Kevin Gurney, Ph.D. ’04
Gurney received a BA in Physics from UC Berkeley, an MS in Atmospheric Science from the MIT, an MPP in Public Policy from UC Berkeley, and a Ph.D in Ecology under the guidance of Dr. Scott Denning at CSU (Dec 2004). An IPCC author and an NSF Career Award recipient, Gurney is an Associate Professor of Global Change at Arizona State University working on CO2 emissions quantification, carbon-climate interactions, and carbon policy. Gurney resides in Scottsdale and is joined by his wife (Dr. Helen Rowe), son (Hayden-3) and daughter (Fiona-4 months).

12:00 – 12:20
Better Living through Chemistry: Contributions of the CSU Atmospheric Chemistry Program
Gavin McMeeking, Ph.D. ’08
Gavin McMeeking received a B. A. from UC Berkeley in 2002 and his Ph. D. from CSU under Dr. Sonia Kreidenweis in 2008. He returned to CSU to continue working with Dr. Kreidenweis and Dr. Paul DeMott after spending 2 and a half years as a postdoc at the University of Manchester in the UK. He will be starting a full-time position as a scientist with Droplet Measurement Technologies, an instrument manufacturer in Boulder, Colorado, next year.
Luncheon

Welcome and Introductions
Jeffrey L. Collett, Jr.,
Department Head,
Atmospheric Science

Presentation of H. Riehl's personal copy of “Tropical Meteorology”
Herbert Riehl, Jr.

Presentation of 125 Year Length of Service Award to Colorado State University
Robert Glancy
National Weather Service, Boulder, CO
Presented to Colorado State University in recognition of 125 years of uninterrupted collection of weather observations.

Keynote Address:
Fifty Years of Colorado Weather
Nolan Doesken
Colorado State Climatologist
Nolan Doesken has been at Colorado State University with the Colorado Climate Center since 1977, serving as the Assistant State Climatologist until his appointment as State Climatologist in 2006. Nolan received a B.S. in Meteorology and Oceanography from the College of Engineering at the University of Michigan in 1974 and M.S. in Atmospheric Science from the University of Illinois in 1976. He served as President of the American Association of State Climatologists from 2008-2010. In addition to monitoring current and long term climatic conditions in Colorado, Nolan is also the founder and national director of the Community Collaborative Rain, Hail and Snow network (CoCoRaHS).

Poster Session

2:30 p.m. – 4:30 p.m.

Real-time Global Flood and Landslide Estimation Using Satellite Rainfall Information
Robert Adler ('74), Huan Wu, Dalia Kirschbaum
University of Maryland

Land-Atmosphere Interaction in Tropical South America
Ian Baker ('11), Anna Harper ('12), A. Scott Denning ('94), Reto Stockli
Colorado State University / MeteoSwiss

Transport and Deposition of Reactive Nitrogen in Rocky Mountain National Park
Katherine B. Benedict ('12), Derek Day, Sonia M. Kreidenweis, Breet Schichtel, William C. Malm, Jeffrey L. Collett, Jr.
Colorado State University

Is It Getting Hot Here, Or Is It Just Me?
Mark Branson ('91) and Charlotte DeMott ('96)
Colorado State University

Construction of the New NASA Water Vapor Project-MEaSUREs (NVAP-M) Global Water Vapor Dataset
Janice L. Bytheway (MS 2008), Thomas H. Vonder Haar and John M. Forsythe
Colorado State University

The New NVAP-M (NASA Water Vapor Project – MEaSUREs) Global Water Vapor Dataset
Thomas H. Vonder Haar, Janice L. Bytheway (MS 2008), John M. Forsythe
Colorado State University

Deployment of CSU Upper-air Sounding System in Recent Field Campaigns
Paul Ciesielski ('80), Todd Jones ('10) and Rob Seigel ('10)
Colorado State University

A Comparison of Tropical Belt Width Diagnostics
Nicholas Davis and Thomas Birner
Colorado State University

Ice nuclei from sea spray aerosols
Paul J. DeMott ('90), Matt Ruppel, Kim Prather, Ryan C. Sullivan, Allan Bertram, Ryan Mason, Thomas C. Hill, Gary D. Franc, Andrew P. Ault, Vicki Grassian, Myrelis Diaz-Martinez, and Olga Mayol-Bracero
Colorado State University

Longwave Angular Distribution Models for the CERES Instrument on the Terra and Aqua Satellites
Zachary Etzen ('01) and Wenying Su
Science Systems and Applications, Inc.

Meteorology and Mountaineering: Hal Klieforth’s Connection to Colorado State University
Matthew G. Fearon
Desert Research Institute

Using Satellite Data to Verify Hurricane Forecasts
Tom Greenwald ('94), Tomislava Vukicevic, and Jim Davies
University of Wisconsin-Madison

Why Does Moisture Sensitivity Foster an MJO?
Walter Hannah ('09) and Eric Maloney
Colorado State University

A History of RAMMB-NOAA at CSU: Cooperating in Atmospheric Science
Don Hillger ('83), Mark DeMaria ('83), Deb Molenar ('79), John Knaff ('97), and Dan Lindsey ('08)
NOAA/NESDIS/STAR/RAMMB and CIRA/Colorado State University

The CSU Mesoscale Dynamics Group
Johnson Research Group
Colorado State University

The CSU-CHILL National Radar Facility
Steven A. Rutledge, V. Chandrasekar, V. N. Bringi, Patrick C. Kennedy, David A. Brunkow, Jim George, and Robert K. Bowie
Colorado State University

The Ft. Jackson Prescribed Burn Study
Sonia Kreidenweis, Taehyoung Lee ('07), Amy Sullivan, Gavin McMeeking ('08), Bob Yokelson, and Shawn Urbanski
Colorado State University

Long-term Measurements of Aerosol Hygoscopicity at a Forested Site in Colorado
Ezra Levin ('12), Anthony Prenni, Samuel Atwood ('12), Ryan Sullivan, Paul DeMott ('90), Sonia Kreidenweis, Markus Peters, John Ortega, and James Smith
Colorado State University

Dynamical Downscaling NCEP Global Climate Forecast System (CFS) Seasonal Predictions using the Regional Atmospheric Modeling System (RAMS)
Lixin Lu ('99), Y. Zheng, and Roger A. Pielke Sr.
CIRA / Colorado State University

Ensemble-based Analysis of the May 2010 Extreme Rainfall in Tennessee and Kentucky
Samantha L. Lynch ('12) and Russ S. Schumacher
Colorado State University

Intrasessional Variability of African Easterly Waves in the Superparameterized-CCSM
Rachel R. McCrary ('12) and David A. Randall
Colorado State University

The North American Land Data Assimilation System (NLDAS): Over 30 Years of Hourly Gridded Precipitation, Surface Meteorology and Fluxes, Soil Moisture, Runoff, and Snow Cover, including a near real-time Drought Monitor
David Mocko ('94), Christa Peters-Lidard, Sujay Kumar, Youlong Xia, Michael Ek, Jiariu Dong, and Hualan Rui
SAIC at NASA Goddard Space Flight Center
"Must eddies always spin me down? An illustration of TC eddy spin up"
John Persing ('02), Michael T. Montgomery, Jim McWilliams, and Roger K. Smith
Naval Postgraduate School

ATS/CIRA Support to the NASA CloudSat Mission
Donald L. Reinke ('82), Graeme L. Stephens, Steven D. Miller, Philip T. Partain, Dale G. Reinke, Michael J. Hiatt, Karen E. Milberger, Robert J. Viola
Cooperative Institute for Research in the Atmosphere (CIRA)

CIRA: Research, Support, Collaboration, and Education
Matt Rogers ('02, '08) and the entire CIRA Staff
Cooperative Institute for Research in the Atmosphere (CIRA)

CoAgMet: The Colorado Agricultural Meteorological Network
Wendy Ryan and Nolan Doesken
Colorado Climate Center

Remote Versus Local Forcing of East Pacific Intraseasonal Variability
Adam Rydbeck ('12), Eric Maloney, Shang-Ping Xie, Jan Hafner, and Jeffrey Shaman
Colorado State University

Extreme precipitation on multiple scales: Processes, prediction, and remaining problems
Russ S. Schumacher ('08)
Colorado State University

Investigating Types and Sources of Organic Aerosol in the Rocky Mountains Using Aerosol Mass Spectrometry
Misha Schurman ('09), Taehyoung Lee ('07), Yele Sun, Bret Schichtel, Sonia Kreidenweis, and Jeffrey L. Collett, Jr.
Colorado State University / NPS / CIRA

Transient Tropospheric Forcing of Sudden Stratospheric Warmings
Jeremiah P. Sjoberg ('12) and Thomas Birner
Colorado State University

An Intraseasonal Model for the Prediction of Atlantic and East Pacific Tropical Cyclone Genesis
Stephanie A. Slade ('12) and Eric D. Maloney
Colorado State University

Observation Sensitivity Experiments (OSEs) at ESRL
Tracy Lorraine Smith ('83), Stan Benjamin and Bill Moninger
Cooperative Institute for Research in the Atmosphere (CIRA) working at the Earth System Research Laboratory (ESRL)

Re-evaluating PDSI: A Comparison Between 3-Month and 12-Month Values
Sharon Marie Sullivan, Deirdre Kann, and David Gutzler
National Weather Service Albuquerque and University of New Mexico

High-frequency variability of dissolved oxygen in the subpolar North Pacific
Yohei Takano ('11), Taka Ito, and Curtis Deutsch
Georgia Institute of Technology

Examining Convective Downdrafts with High-Resolution CRM Data
Katherine Thayer-Calder ('12) and David Randall
Colorado State University

Measurements and parameterization of ice nuclei concentrations at a forested site in Colorado: Results from the BEACHON-RoMBAS campaign
Yutaka Tobe, Anthony J. Prenni, Paul J. DeMott, Christina S. McCluskey, and Sonia M. Kreidenweis
Colorado State University

The van den Heever Research Group: Microphysics, Cloud Dynamics, and Modeling
Susan van den Heever ('01) and Group Members
Colorado State University

Case Study of the 12-13 November 2011 Windstorm in South Central Colorado
Paul Wolyn ('92)
NOAA/NWS Pueblo, CO

The Role of Eddy Fluxes of Heat and Momentum in Midlatitude Climate Variability
Jonathan D. Woodworth ('13) and David W.J. Thompson
Colorado State University

Atmospheric Temperature Profiles
Young P. Yee ('78), Kueyson Y. Yee, Erik Y. Yee
Mkey Technologies

Conclusion of 50th Anniversary Conference
Please join us, with your guests, for the evening’s activities and the Saturday ATS/CIRA Open House:

5 p.m. – 6 p.m.
Reception, Hilton Atrium

6 p.m. – 8 p.m.
Anniversary Banquet, Hilton Main Ballroom

Saturday, July 14, 10 a.m. – 2 p.m.
ATS/CIRA Open House
Atmospheric Science Campus

Acknowledgments
The Department of Atmospheric Science at Colorado State University thanks our alumni, friends, and current students, staff and faculty for celebrating this special occasion with us. We are grateful to Dr. Rick Miranda, CSU Provost and Executive Vice President, for financial support of our Anniversary Open House, and to Dr. William Farland, the CSU Vice President for Research, for financial support for the 50th Anniversary Conference.
We are also grateful to Dean Sandra Woods and the College of Engineering for their support of this weekend’s events. We thank Jen Welding and James Conway of CSU Events and Constituent Engagement for their invaluable help in planning and execution of all of our Anniversary events. We thank Barbara Dennis and her team in Communications and Creative Services for their energy and talent in designing and producing our printed Anniversary materials, including this program. Finally, the Anniversary celebration would not have been possible without the creativity and enthusiasm of numerous Atmospheric Science and CIRA volunteers who have served on our Anniversary Planning Committees.