Monday, September 19, 2016

7:00 – 9:00 am Complimentary breakfast for those staying in the Embassy Suite

8:00 – 9:00 am: Registration

9:00 – 9:15 am: Welcome and logistics

9:15 – 10:30 am: Scientific Overview of PECAN Research Components
   Chair: Bart Geerts (U Wyoming)

   i) Observations of Low-Level Jets during PECAN -- Richard D. Clark (Millersville University), Todd D. Sikora (FP3), Qing Wang, Belay Demoz (FP2), and Thomas Parish (UWYO K/A), Petra Klein (CLAMPS), and students.

   ii) Pristine nocturnal elevated convective initiation: A preliminary climatology and evaluation of predictability during PECAN -- Sean A. Stelten and W. A. Gallus, Jr. (presented by Brian Squitieri, Iowa State University)

   iii) Simulated nocturnal convective systems from the PECAN field experiment - M. D. Parker (North Carolina State University), R. S. Schumacher, C. L. Ziegler, M. I. Biggerstaff, M. C. Coniglio, E. R. Mansell, and T. J. Schuur

   iv) Bores as a Dynamical Framework for Understanding and Predicting Nocturnal Convection – D. Parsons (University of Oklahoma), K. Haghi and B. Blake

10:30 – 10:45 am Coffee break

10:45 to 12:15 pm Status of PECAN Data Sets I
   Chairs: Vidal Salazar (NCAR) and Belay Demoz (University of Maryland at Baltimore County)

   PECAN Data Management Update: PECAN Data Management Update
   Scot Loehrer (NCAR/EOL), Linda Echo Hawk, and Linda Cully

   EOL Datasets: S-Pol, WV DIAL, ISS: Tammy Weckwerth (NCAR/EOL) et al.

   Airborne Compact Raman Lidar data collected during PECAN: Zhien Wang (U Wyoming), D. Wu and B. Geerts

Status and processing of microphysical data collected during the 2015 PECAN project: Greg M McFarquhar (U Illinois), D. M. Stechman, Robert M. Rauber, Brian F. Jewett, Robert A. Black, David P. Jorgensen, Michael M. Bell, Terry J. Schuur

New Software Tools For Radar “Big Data” from PECAN: Michael M. Bell (Colorado State University), M. Dixon, W.-C. Lee

12:15 – 1:30 pm: Lunch – provided

1:30 – 3:00 pm MCS Science
Chairs: Mike Coniglio (NOAA/NSSL) and Xuguang Wang (University of Oklahoma)

Analyzing errors in MCS forecasts with PECAN sounding observations
Russ Schumacher (Colorado State University), J. Peters, E. Nielsen, M. Parker, S. Hitchcock, M. Coniglio, and C. Ziegler


Plains Elevated Convection At Night (PECAN): Preliminary Multi-Platform Analyses of Severe Surface Wind Production in Nocturnal MCSs: Karen Kosiba and Josh Wurman, Center for Severe Weather Research, Boulder, CO

Microphysical and thermodynamic structure of two nocturnal elevated mesoscale convective systems sampled during the 2015 PECAN project: Daniel M. Stechman (U of Illinios), G. M. McFarquhar, R. M. Rauber, B. F. Jewett, R. A. Black, D. P. Jorgensen, M. M. Bell, T. J. Schuur

Design and implementation of a GSI-based convection-allowing ensemble data assimilation and forecast system for the PECAN field experiment. -- Aaron Johnson, Xuguang Wang and Samuel Degelia, University of Oklahoma

Discussion

3:00-3:30 Coffee break – poster set-up
3:30-4:45 pm LLJ Science
Chair: Petra Klein (University of Oklahoma) and Dave Turner (NOAA/ESRL)

Nocturnal boundary-layer structure and evolution of the low-level jet during PECAN -- Petra M. Klein (University of Oklahoma), E. N. Smith, D. D. Turner, and E. Fedorovich

Atmospheric Surface Layer Turbulence and Profiles Measurements from PECAN FP2 Site at Greensburg, Kansas: Qing Wang, R. Yamaguchi, R. J. Lind, M. K. Beall, G. R. Eberle (Naval Postgraduate School), John A. Kalogiros (National Observatory of Athens, Athens, Greece), Belay Demoz (University of Maryland, Baltimore County, Maryland) – presented by Mike Beall

A baroclinic nocturnal low-level jet over the Great Plains: Alan Shapiro, Joshua Gebauer, and Evgeni Fedorovich, University of Oklahoma

Effects of shallow slope on the evolution of numerically simulated nocturnal low-level jets: Evgeni Fedorovich (University of Oklahoma), Jeremy Gibbs (OU/CIMMS and University of Utah) and Alan Shapiro (University of Oklahoma)

Discussion

4:45-6:00 pm Status of PECAN data sets II
Chair: Conrad Ziegler (NOAA/NSSL) and Karen Kosiba (Center for Severe Weather Research)

Summary and highlights of PECAN FP2 measurements: Belay Demoz (University of Maryland at Baltimore County), Kevin Vermeesch, David Whiteman, Brian Caroll, Lorenza Cooper, Monique Walker, Bruce Gentry, Huailin Chen, David Turner, Martin Cadirolla, Sium Tesfay, Amber Emory, Qing Wang, and Dial Hoang

Highlights of MIPS measurements during the PECAN field campaign: Kevin Knupp (University of Alabama in Huntsville)

Thermodynamic Profiling in the Boundary Layer from the AERIs at the PISA Sites: David Turner (NOAA)

Comparison of lidar water vapor measurements at Fixed PISA 2: Kevin Vermeesch (University of Maryland Baltimore County, Baltimore, MD), David Whiteman, Zhien Wang, Richard Ferrare, and Belay Demoz

A First Look at NASA X-Band Atmospheric Doppler Ground-based Radar (X-BADGER) Data from the PECAN FP2 Site in Greensburg, Kansas: Amber
Emory (NASA Goddard), Stephen Nicholls, Michael Coon, Belay Demoz, and James Carwell

Drop-size distribution measurements in mesoscale convective systems during PECAN: David J. Bodine (University of Oklahoma), Kristen L. Rasmussen, Katja Friedrich, Karen Kosiba, Joshua Wurman, and Paul Kucera

6:15 to 8:30 pm POSTER SESSION with food and beverages
Additional posters are welcome

Model resolution and observation impact study of the 11 July bore/MCS IOP: Aaron Johnson and Xuguang Wang, University of Oklahoma

A systematic study of bores during IHOP_2002 and how these results can be applied to PECAN, Kevin Haghi, University of Oklahoma

Evaluating the use of RAP analyses for model validation as compared to PECAN observations for Great Plains LLJ events: David E. Jahn and William A. Gallus, Iowa State University

An overview of data collected during PECAN using RaXPol Zachary B. Wienhoff, Kyle J. Thiem, Howard B. Bluestein, and Dylan W. Reif (University of Oklahoma)

An overview of data collected during PECAN using TWOLF Dylan W. Reif (University of Oklahoma), Chris O’Handley, Manda B. Chasteen, Howard B. Bluestein, and Dave Emmitt

Characterizing the Effects of Convection on the Afternoon-to-Evening Boundary Layer Transition During PECAN 2015: G. Eberle, Q. Wang, M. Beall, R. Yamaguchi, and R. L. Lind

Observing Atmospheric Boundary Layer Features with an Airborne Compact Raman Lidar During PECAN: Guo Lin, Zhien Wang, Bart Geerts, and Decheng Wu, University of Wyoming

Analysis of a Severe MCS and Nocturnal Tornadogenesis sampled by PECAN on 5 July 2015: Matt Flournoy, University of Oklahoma

Using a Water Vapor Differential Absorption Lidar and 449 MHz Radar Wind Profiler to study turbulent fluxes in the lower troposphere during the PECAN 2015 field campaign: Kristy Weber (NCAR and University of Colorado, Boulder), Tammy Weckwerth, and Peter Blanken

Observations of the Low-Level Moisture Burst During the Afternoon to Evening Transition during PECAN, W.G. Blumberg (University of Oklahoma) and D. D. Turner

Overview of the CSWR DOW facility PECAN data sets: K. Kosiba and J. Wurman (CSWR)

The Great Plains Low-Level Jet During PECAN: Initial Comparisons of Profiling Observations with WRF Model Predictions, Elizabeth Smith (University of Oklahoma), Petra Klein, Evgeni Fedorovich, Jeremy Gibbs

An Overview of the 20 June 2015 Convective Initiation Event during PECAN, Brianna M. Lund and Kevin Knupp (University of Alabama in Huntsville)

Kinematics, thermodynamics, and microphysics of the 25-26 June 2015 Kansas MCS during PECAN; Rachel L. Miller (University of Oklahoma), C.L. Ziegler, and M. I. Biggerstaff

Measurements at FP3 in Support of PECAN Scientific Objectives Using Surface Flux Tower. Jennifer Hane, Millersville University

Measurements at FP3 in Support of PECAN Scientific Objectives Using MPL-111 Lidar: Kristen N. Pozsonyi, Millersville University

Measurements at FP3 in Support of PECAN Scientific Objectives Using MFAS SODAR with RASS Natalie A. Midzak, Millersville University

Evolution of Thermodynamic Vertical Profiles from Pre- and Post-Convective Environments of Mesoscale Convective Systems Observed During PECAN, Stacey Hitchcock, Colorado State University

Understanding the maintenance of nocturnal MCS through ensemble-based data assimilation and high-resolution simulations, Hristo Chipilski, Xuguang Wang and David Parsons, University of Oklahoma

Tuesday, September 20, 2016

7:00 – 8:30 am Complimentary breakfast for those staying in the Embassy Suite
8:30 - 10:00 am Convective Initiation Science  
Chairs: Rita Roberts (NCAR/RAL) and Jim Wilson (NCAR/EOL) 

Studies of convection initiation during PECAN using high-resolution EnKF data assimilation – Jim Marquis, University of Colorado-Boulder, Josh Wurman (CSWR), Glen Romine (NCAR), Tammy Weckwerth (NCAR), and Jim Wilson (NCAR) 

The role of the nocturnal low-level jet in convection initiation over eastern Kansas on 2 June 2015: Joshua Gebauer, Alan Shapiro, Evgeni Fedorovich, and Petra Klein (University of Oklahoma) 

Understanding and predicting nocturnal convection initiation using an ensemble-based multi-scale data assimilation system – Sam Degelia, Xuguang Wang (University of Oklahoma) and David Stensrud 

Elevated convection initiation on 24 June 2015 during PECAN: A Case Study Scott Kehler and John Hanesiak (Centre for Earth Observation Science, University of Manitoba) 

Discussion 

10:00 am -10:30 am: Coffee break 

10:30 am-11:45 pm: Bore Science  
Chairs: Kevin Knupp (University of Alabama in Huntsville) and Alan Shapiro (University of Oklahoma) 

Bores in PECAN and implications for convection – Kevin Haghi (University of Oklahoma), D. Imy, D. Parsons and A. Shapiro 

Evolution and vertical structure of an undular bore observed on 20 June 2015 during PECAN: Dana Mueller, Bart Geerts, Min Deng, and Zhien Wang, University of Wyoming 

Influence of bores on nocturnal convective initiation during PECAN and the Canadian prairies: A case study analysis: Kyle Ziolkowski and John Hanesiak (University of Manitoba) 

Insights from AERIs during the 2015 PECAN campaign: Timothy Wagner (University of Wisconsin), David Loveless, Jonathan Gero, Denny Hackel, David Turner, W. Gregory Blumberg, Kenneth Cook, Henry Downey, Wayne Feltz, Wagner et al.
Discussion

11:45 am – noon: Discussion and planning for breakout sessions

12:00-1:15 pm – Lunch provided

1:15 pm -3:00 pm Breakout Session A

An MCS breakout and a CI/Bore/LLJ breakout includes time for discussion and also time for short presentations -- the idea is to generate opportunities for collaboration, identify problems in data sets

3:00-3:30 pm: Coffee break

3:30-5:00 pm: Breakout Session B

Continuation of breakouts but with a different mix of the groups -- perhaps Bore/MCS/CI and LLJ include time for discussion and also time for short presentations

5:00 -- 6:00 pm Individual groups meet as needed

Wednesday, September 21, 2016

7:00 – 8:30 am Complimentary breakfast for those staying in the Embassy Suite

8:30 - 10:15 am Report from breakout groups leads

Chair: Tammy Weckwerth (NCAR/EOL) and David Parsons (University of Oklahoma)

Key science questions requiring collaboration, needs, priority cases), then open discussion and action items

10:15 am – 10:30 am Coffee break

10:30 am – 11:30 am Discussion of data status and needs

Chair: Bart Geerts (U Wyoming)

11:30 am – noon Future plans, sessions at conferences, workshops