



# Cooperative Institute for Precipitation Systems

## **This Period in CIPS: July – September 2007**

### **Upcoming Conferences and Presentations**

Presentations are being prepared for the National Weather Association's Annual Meeting in Reno, Nevada: 13-18 October 2007.

A Comparison of the Radar Characteristics and Mesoscale Environments of Two Mesoscale Snowband Events in the Upper Midwest: Emily B. Eisenacher and Charles E. Graves

Examining the Preconvective Heavy Rainfall Environments Utilizing Observational and Model Analysis Proximity Soundings: Michael J. Paddock, Charles E. Graves, and Jason T. Martinelli

An Examination of Model Analysis Vertical Profile Biases for Preconvective Heavy Rainfall Environments: Michael J. Paddock, Charles E. Graves, and Jason T. Martinelli

A Climatology and Statistical Classification of Midwestern Snow Bands: A Process-Oriented Approach: Chad M. Gravelle, Charles E. Graves, and Scott M. Rochette

Object Oriented and Traditional Precipitation Verification of the 2004-2005 SPC/NSSL Spring Programs: Adam N. Pasch and Charles E. Graves

One CIPS member will present research associated with heavy rainfall at the 88th AMS Annual Meeting for the 22nd Conference on Hydrology. The presentation title and authors are listed below:

Examining Preconvective Heavy Rainfall Environments Utilizing Observational and Model Analysis Proximity Soundings: Michael J. Paddock, Charles E. Graves, and Jason T. Martinelli

### **Submitted Articles**

Using work performed under a COMET Partners grant, the following article is currently in final formatting stage for publication in the National Weather Digest:

Graves, C. E., R. A. Wolf, J. T. Moore, J. A. Zogg, and B. L. Mickelson, 2007: Analysis of the 3-4 June 2002 extreme rainfall event over Iowa and Illinois. *Natl. Wea. Dig.*, **31**, 83-102.

## **CIPS Team Notes**

Last spring the Department of Earth and Atmospheric Sciences held a one day informational meeting for the general public on global warming, which was a great success. Therefore, a second informational meeting has been planned for 14 November from 7:30 to 9:00 pm. The first meeting centered around the science of global warming, while the second meeting will focus on Public Policy and Health, Chemistry, Political Science, and Environmental Law. The meeting will be held in the Living World located at the Saint Louis Zoo.

Dr. Benjamin DeFoy will present his research at the Fall Meeting of the American Geophysical Union on 10-14 December located in San Francisco.

Dr. Timothy Eichler, our newest faculty member, and Dr. Zaitao Pan will be presenting their research at the 88th AMS Annual Meeting in the 20th Conference on Climate Variability and Change. Both will give a presentation, while Dr. Eichler is also tapped to be a session chair.

The Analysis of the 3-4 June 2002 Extreme Rainfall Event Over Iowa and Illinois will appear in the National Weather Digest in the December 2007 issue. The page proofs have been approved and color figures are being supplied to best illustrate the research.

The new collaboration with the National Weather Service Binghamton, New York, Office is progressing. Tentative cases have been chosen in the Midwest for possible comparison. Just a reminder, this collaboration was established to investigate, compare, and contrast East Coast snow storms with Midwest snow storms. A special thanks goes to Mike Evans (SOO), Mike Jurewicz (Senior Forecaster), and Mike Paddock for setting the proper ground work to get the ball rolling on this new project.

CIPS team members are preparing presentations for the 32nd National Weather Service Annual Meeting in Reno, Nevada. Check the Presentations Page in mid-October to view and/or download all the presentations given during the conference.

The research of one CIPS member was accepted for the 22nd Conference on Hydrology as part of the 88th AMS Annual Meeting in New Orleans, Louisiana. Mike Paddock will present: Examining Preconvective Heavy Rainfall Environments Utilizing Observational and Model Analysis Proximity Soundings. The research is tentatively scheduled to start at 2:30 pm on Monday, 21 January 2008.

CIPS team members are continuing to collaborate with Wes Junker (HPC contractor) and Matt Kelsch (UCAR/COMET) with the investigation of the Kansas turnpike flash flood case of August 30-31 2004. A paper will culminate from this collaboration in the very near future.

## **CIPS Team News**

Jaime Poole has graduated with her Ph.D and was accepted as a full time faculty member at Southern Illinois University located in Edwardsville, Illinois. Congratulations and Good Luck with those students!!

Mike Paddock is continuing his Ph.D. studies with emphasis on heavy rainfall proximity soundings. He has preliminary results, utilizing a dataset of thirty-three cases for rainfall of four inches or greater, forty-seven cases for rainfall of one-two inches, and hundreds of no-rainfall soundings. All soundings are from 2003-2005. Mike is using Fred Glass (Lead Forecaster, St. Louis NWS) as a consultant for this study. Two posters centered on this research will be presented at the NWA Annual Meeting in October.

Adam Pasch is continuing his Ph.D. studies with emphasis on high resolution model precipitation verification. Adam is using a modified Ebert-McBride Technique to do object oriented verifications. The dataset he is using comes from the Spring Program which consists of three different versions of the WRF model. Adam is currently fine-tuning his research code. An oral presentation associated with this research will be presented at the NWA Annual Meeting in October.

Emily Eisenacher is in the second year of her Ph.D. studies. She is studying the environment and radar characteristics of six case studies. The investigation includes multi-banding versus single-banding, patterns of evolution of mesoscale processes, and band orientation and rotation compared to the band motion. She will also compare WRF model simulated radar reflectivity with the actual radar reflectivity. Her research will be presented on a poster at the NWA Annual Meeting in October.

Chad Gravelle has graduated with a Master's degree. He investigated snowfall potential in the Midwest based on system classification. He was collaborating with Fred Glass (Lead Forecaster, St. Louis NWS) on this study and plans to continue this collaboration in the future. The title of his thesis is: A Climatology and Statistical Classification of Midwestern Snow Bands: A Process-Oriented Approach. Congratulations! Chad is planning to stay at Saint Louis University for his Ph.D. His Master's research will be visible on a poster at the NWA Annual Meeting.

Erin Snavelly has graduated with a Master's degree and is currently employed with the National Weather Service at the Lake Charles, Louisiana, Office. Congratulations Erin!!