



Cooperative Institute for Precipitation Systems

This Period in CIPS: April – June 2006

Conferences and Presentations

Four CIPS members presented various research topics at the Missouri Academy of Science meeting in Kirksville, MO on 22 April 2006. The presentation titles are listed below:

The GFS Model in a Busted Snow Event: 15-16 January 2003: Chad M. Gravelle, Fred H. Glass, James T. Moore, and Charles E. Graves

An Application of Corfidi Vectors to a Spectrum of Mesoscale Convective System Types: Kelly Kubinski, James T. Moore, and Charles E. Graves

Characteristics of Mesoscale Snowbands and the Environment in Which They Formed: Emily B. Eisenacher, James T. Moore, and Charles E. Graves

A Diagnostic Analysis of the 1-2 October 2005 Flash Flood Event: Erin E. Snavelly, Adam N. Pasch, Charles E. Graves, and James T. Moore

Upcoming Conferences and Presentations

Marty Baxter is currently preparing a presentation for the 23rd Conference on Severe Local Storms, which will meet in St. Louis, MO from 6-10 November 2006.

Baxter, M. A., and C. E. Graves, 2006: A case example of the role of warn-sector convection in the development of mesoscale banded snowfall: 2003 November 22-24. Preprints, 23rd Conf. on Severe Local Storms, St. Louis, MO, Amer. Meteor. Soc., 4.6.

Abstracts and Presentations are currently being generated for the National Weather Association's 31st Annual Meeting in Cleveland, OH from 14-19 October 2006.

A Conceptual Model Depicting Processes Important for the Generation of Meso-beta Scale Snow Bands (Poster): Michael J. Paddock, Charles E. Graves, and James T. Moore

A Diagnostic Analysis of Mesoscale Snow Bands, Which Occurred on 26 February 2003 (Poster): Michael J. Paddock, James T. Moore, and Charles E. Graves

The GFS Model in a Busted Snow Event: 15-16 January 2003 (Poster): Chad M. Gravelle, Fred H. Glass, James T. Moore, and Charles E. Graves

Cold-Season Coupled Upper-Level Jet Streaks in the Northeastern U.S. Part I: Weak Dynamic Cases (Poster): Scott M. Rochette, Chad M. Gravelle, and Thomas A. Niziol

Cold-Season Coupled Upper-Level Jet Streaks in the Northeastern U.S. Part II: Strong Dynamic Cases (Poster): Scott M. Rochette, Chad M. Gravelle, and Thomas A. Niziol

An Investigation of the Radar Characteristics and the Environment of a Mesoscale Snowband that Formed on 15 March 2004 (Poster): Emily B. Eisenacher, James T. Moore, and Charles E. Graves

Submitted Articles

Using work performed under a COMET Partners grant, the following article is being revised 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

The Department of Earth and Atmospheric Sciences is busy moving out of Macelwane Hall and in to O'Neil Hall. O'Neil Hall is located at 3642 Lindell Blvd. The move should be complete by the beginning of the fall semester in August. The Department will occupy all of O'Neil Hall. The move also allows the Biology Department to expand, essentially using the majority of Macelwane Hall.

With the Department moving in July, the Department websites, email, and phone numbers might be inaccessible for a short period of time. So, please be patient during this process. Thank You.

The Department of Earth and Atmospheric Sciences would like to congratulate and welcome Dr. William Dannevik as the new Department Chair. He was previously the interim Department Chair of the Earth and Atmospheric Sciences Department here at SLU.

The Department of Earth and Atmospheric Sciences would also like to welcome Dr. Benjamin DeFoy as the new Assistant Professor of Meteorology. Before this appointment he was conducting research in southern California and Mexico in a post doctorate position.

CIPS team members are continuing to collaborate with Wes Junker, an HPC contractor, and Matt Kelsch of 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 near future.

Adam Pasch and Mike Paddock are teaming up to publish an article. The topic is related to their Master's research, meso-beta scale snow bands. A diagnostic analysis and model simulation will be presented on one case study.

Adam Pasch is working on an article for publication. The article will involve a diagnostic analysis of a heavy rainfall event: 18-19 May 2004 Kansas City flash flood.

Mike Paddock is nearing the completion of an article, which will be submitted to the National Weather Digest. The article is a case study of a meso-beta scale snow band event, which occurred on 26 January 2003.

Also don't forget that the Presentations, Recent Events, and This Period In CIPS pages are updated frequently. Check back from time to time and see what's new and with the CIPS team.

CIPS Team News

Marty Baxter is anticipating graduating with his Ph.D. by the end of the summer. His defense is not scheduled yet. Marty's work involves the role of convection in winter storms and the predictability of such systems. He has been offered and accepted a full-time Assistant Professor position at Central Michigan University. Congratulations and Good Luck Marty!

Jaime Poole continues to work toward the completion of her Ph.D. She is preparing for her oral exam. Currently she is using the Weather Research and Forecasting (WRF) model to run simulations of elevated thunderstorm events. The focus of her research is to investigate numerous cases, each representing a different distance between the area of elevated convection and the associated surface boundary, in order to identify possible initiation and propagation characteristics of elevated storm systems.

Mike Paddock continues to work with Ron Przybylinski (SOO, St. Louis NWS) and Gary Schmocker (Forecaster, St. Louis NWS) on cases involving very narrow snow bands. He is also beginning his Ph.D. studies with emphasis on heavy rainfall proximity soundings with preliminary results, utilizing twelve test cases, expected in the fall. Mike has handed out his prospectus to the faculty in preparation for the written portion of the Ph.D. exam.

Adam Pasch is beginning his Ph.D. studies with emphasis on precipitation verification. Adam is in contact with Beth Ebert (Bureau of Met. Research Centre, Melbourne Australia), Barbara Brown (NCAR), Steve Weiss (SPC/NSSL), and Mike Baldwin (NSSL) to obtain various data sets and code for his precipitation verification studies. He has also handed out his prospectus to the faculty in preparation for his written exam.

Jeff Vitale has graduated with a Master of Science degree in May. Way To Go Jeff! His thesis title is The Development of Low-echo Centroid Storms. His research involves investigating low-echo centroid storms to better understand their mesoscale environment.

Chad Gravelle is investigating snow null events and is going to present one case at the NWA Annual Meeting. He is working closely with Fred Glass (Lead Forecaster, St. Louis NWS) on one of these null events. Chad is also helping Ron Przybylinski (SOO, St. Louis NWS) with the Greater St. Louis AMS meetings. He continues to work with Scott Rochette (Associate Professor at State University of New York, College at Brockport) and Thomas Niziol (MIC, Buffalo NWS) on the dynamics of coupled upper-level jet streaks (two posters will be presented at the NWA Annual Meeting). He has also passed his Master's qualifying exam in April. Congratulations Chad!

Emily Eisenacher has graduated with a Master of Science degree in May. Great Job Emily! Her thesis title is Radar Characteristics of Mesoscale Snowbands and the Environment in Which They Form. She has decided to stay at SLU and work on her Ph.D. after graduation. We are glad to keep you with us, Emily!

Kelly Kubinski has graduated with a Master of Science degree in May. Congratulations Kelly! Her thesis title is An Application of Corfidi Vectors to a Spectrum of Mesoscale Convective System Types. Her research involved investigating forward, backward, and stationary MCSs.