



Cooperative Institute for Precipitation Systems

This Period in CIPS: January – March 2008

Conferences and Presentations

One CIPS member presented 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:

Paddock, M. J., C. E. Graves, and J. T. Martinelli, 2008: Examining preconvective heavy rainfall environments utilizing observational and model analysis proximity soundings. Preprints, 22nd Conf. on Hydrology, New Orleans, LA, Amer. Meteor. Soc., P1.1.

Upcoming Conferences and Presentations

The following presentations are being prepared for the Missouri Academy of Science Meeting in Joplin, MO, 19 April 2008:

AN ENSEMBLE FORECASTING APPROACH TO A MIDWEST WINTER STORM: 31 JANUARY 2008: Gravelle, C. M., and C. E. Graves

AN INVESTIGATION OF THE MESOSCALE ENVIRONMENT AND EVOLUTION OF A ST. LOUIS MESOSCALE SNOWBAND EVENT ON 31 JANUARY 2008: Eisenacher, E. B., and C. E. Graves

VALIDATION OF MM5 AND WRF FORECASTS OF THE DEVELOPMENT OF HURRICANE HELENE: Folmer, M. J., R. W. Pasken, B. E. Anderson, and C. E. Graves

ANALOG FORECASTS: USING THE PAST TO HELP PREDICT THE FUTURE: Graves, C. E., C. M. Gravelle, E. Eisenacher

Submitted Articles

Using work performed under a COMET Partners grant, the following article was published in the National Weather Digest Volume 31 - Number Two December 2007:

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.

The following article was submitted to the National Weather Association Electronic Journal:

Eisenacher, E. B., and C. E. Graves, 2008: The evolution and time scale of mesoscale processes that created an intense mesoscale snowband on 15 March 2004 in Des Moines, IA. *Electronic J. Oper. Meteor.*, submitted.

CIPS Team Notes

A machine has been purchased to store the complete North American Regional Reanalysis (NARR) dataset.

CIPS team members are in the beginning stages of creating WES cases in collaboration with the St. Louis NWSFO.

CIPS team members are continuing to collaborate with the Binghamton, NY NWSFO by comparing Northeast snowstorms and Midwest snowstorms.

CIPS Team News

Mike Paddock is nearing the end his Ph.D. studies with emphasis on heavy rainfall proximity soundings. He has 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 NWSFO) and Wes Junker (HPC Contractor) as consultants for this study.

Adam Pasch is also nearing the end of 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.

Emily Eisenacher is well into the Ph.D. program. She is studying the environment and radar characteristics of 3 snowband case studies and expanding a comparison of the evolution of frontogenesis and EPV to include 10-20 more cases. She will also compare WRF model simulated radar reflectivity with the actual radar reflectivity.

Chad Gravelle is expanding his Masters' degree research by expending the organized snowfall climatology to 30 years and using analogs to give situational awareness to heavy snow events in medium range forecasts.