



THE SOUTH DAKOTA SCHOOL OF MINES AND TECHNOLOGY  
INSTITUTE OF ATMOSPHERIC SCIENCES

COMET PARTNERS FINAL PROJECT REPORT  
UCAR AWARD NUMBER S03-38763

**University:** South Dakota School of Mines & Technology  
(SDSM&T)

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**Partners or Cooperative Project:** Partners

**UCAR Award No.:** S03-38673

**Project:** The 7<sup>th</sup> Annual Northern Plains Convective  
Workshop on Analysis, Interpretation, and  
Forecast Application

**Date:** 05 December 2003

## SECTION 1: PROJECT OBJECTIVES AND ACCOMPLISHMENTS

The primary objective for this Partners Project was to organize and produce a workshop to focus on analysis, interpretation, and forecast applications, with an emphasis on *learning vs. presentation*. Several interactive activities were led by the guest speakers, other regional speakers, and the NWS/SDSM&T personnel, all of which supported the above objective.

The second objective—documentation of the workshop—was accomplished by (1) developing a workshop binder with supporting information, such as the agenda and abstracts, (2) creating a video of the guest speakers, and (3) securing the presentations from all of the speakers for distribution on CD-ROM. These resources will serve as a review for further training on the workshop topics. The workshop binder and the CD-ROM are submitted with this report.

The responsibilities of the workshop participants were as follows: (1) with the help of COMET, the NWS and SDSM&T provided resources to organize and produce the workshop; several persons from the two organizations also gave presentations at the workshop, (2) the guest speakers provided two presentations each, which focused on the workshop theme and solicited interaction from the participants, and (3) the attending speakers gave thought-provoking presentations which encouraged the audience to interact in a learning environment.

The primary lesson learned from this workshop is that learning is strongly facilitated when the audience can participate with the speakers (i.e., active vs. passive learning is more efficient and effective).

## SECTION 2: SUMMARY OF UNIVERSITY/NWS/DOT EXCHANGES

The NWS and SDSM&T interacted throughout this project through several planning and organizational meetings (i.e., planning and setting up the meeting facility, inviting the speakers and working with the guest speakers on their presentations, creating a preprint volume, and maintaining a web page with workshop information). Members from each staff also shared information and ideas with each other that went into some of the presentations. This workshop provided an opportunity for the NWS and SDSM&T personnel to meet and develop working relationships.

The workshop also provided a supplement to classroom education for the University's Meteorology courses offered during that time period with 8 students from the SDSM&T Atmospheric Sciences Department participating in the workshop. The base demographics of attendees, by affiliation, are presented here:

<i><b>Affiliation</b></i>	<i><b>Attendees</b></i>
University	18
NOAA	35
Private	7
International	4

Non-NOAA attendees came to the workshop from as far as Alabama, Indiana and Manitoba.

## SECTION 3: PRESENTATIONS AND PUBLICATIONS

There were no formal publications that resulted from the 7<sup>th</sup> Annual Northern Plains Convective Workshop. Proceedings from the Workshop, in the form of abstracts and a CD-ROM with the presentations, are submitted with this report.

## SECTION 4: SUMMARY OF BENEFITS AND PROBLEMS ENCOUNTERED

SDSMT benefited from the workshop by providing an excellent environment by which undergraduate and graduate students in Meteorology and Atmospheric Sciences could see a diverse case of case studies relevant to severe weather, as well as meet with NOAA operational meteorologists from the NWS Central Region and beyond. The workshop provided an excellent supplement to courses that were concurrently presented during that academic year [Synoptic Meteorology 1&2 and Dynamic Meteorology 1&2] and also provided excellent leading material for courses that were to be presented in the following Spring Semester [e.g., Mesoscale Meteorology and Applied Meteorology, the latter of which discusses Fire Weather].

The relevance of this workshop to NWS forecast operations included training through discussion of analysis and interpretation techniques. This is expected to benefit NWS forecasters as follows: (1) helping with the identification of features not present in model analyses or radar algorithms, (2) education on the source of meteorological data (and how it is used in the formulation of algorithms), which gives a forecaster a base on which to *evaluate* the performance of a given algorithm, (3) providing an environment to exchange knowledge and expertise between the operational, educational, and research communities, and (4) reminding forecasters of the importance of critically looking at observational data.