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## ***COMET Begins Training for NWS Officers***

COMAP I is the first mesoscale analysis and prediction course of COMET, the Cooperative Program for Operational Meteorology, Education, and Training, part of UCAR. The course is the partial fulfillment of COMET's mission to bring the operational and research meteorology communities together. Timothy Spangler, manager of COMET's residence program is collaborating with instructors Bradley Colman, a research meteorologist for Seattle's National Weather Service (NWS) Forecast Office and Howard Bluestein, meteorology professor at the University of Oklahoma, in presenting the program. Seminars by over two dozen visiting speakers supplement the instruction. These include NWS director Joseph Friday, National Hurricane Center director Robert Sheets, and National Meteorological Center director Ronald McPherson.

Comet will hold COMAP courses twice yearly until the science and operations officers (SOOs) from each of the 120 modernized NWS offices have attended. The SOOs will be responsible for subsequent training and research in the modernized NWS. The driving idea of COMAP is to acquaint the SOOs with new concepts of stormscale weather forecasting using the hardware and software that their contemporaries will be using at local NWS offices by the end of the 1990s.

The course will be a challenge for both the faculty and the SOOs. The faculty must maintain an operational focus on research results. Researchers dissect a storm, which may result in a beautiful analysis, but forecasters need to understand that storm in real time. Forecasters often independently learn black-box rules of thumb for predicting weather for their local area, but they haven't necessarily tied these rules to broader research. Yet the underlying physics of weather are the same in Boston as in Seattle. The SOOs, all of whom have graduate work and an average of ten years experience in the field, will take their newfound knowledge back to the front-line forecasters in their local offices.

COMAP facilities are extensive. Applications software, prototype hardware, and a data feed were provided by the National Oceanic and Atmospheric Administration's Forecast Systems Laboratory in Boulder, which is heavily involved in NWS modernization. A special teaching laboratory with banks of computer terminals was designed specifically for the eight-week courses. When COMET moves into the NCAR Foothills Laboratory next spring, a lab twice as large will have ten workstations and seminar seating for 30. The new space will host COMAP II next fall.

The teaching strategy is to pack lecture, discussion, and lab work into a single package. The instructor begins by displaying and analyzing a case study featuring data collected with dense networks of sensors planned for use by the future NWS. Students can call up the data from that event in multicolor graphic form on their workstations during the lecture. They then test their knowledge in displaced real-time mode: data from a similar past event is updated as if the event were occurring now, and the SOOs have to make forecasts. Case studies for COMAP I were drawn from the Denver, Colorado; Norman, Oklahoma; and Champaign/Urbana, Illinois, areas and from the 1989 Genesis of Atlantic Lows Experiment. Studies for future COMAP courses will draw on two major field programs: the Convective and Precipitation/Electrification Experiment, held this summer in Florida, and the Stormscale Operational and Research Meteorology Program's Fronts Experimental Systems Test, slated for the central United States this winter.

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