

SCSU student researching nighttime weather changes

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ST. CLOUD, Minn. - St. Cloud State University student and aspiring meteorologist Matthew Dux is getting a glimpse of his future this summer: he's working alongside forecasters at the National Weather Service Forecast Office in Sioux Falls, S.D. (WFO FSD).

Dux is analyzing data and creating detailed maps as part of a collaborative research project between the WFO FSD and SCSU Professor Robert Weisman in the Department of Earth and Atmospheric Sciences. The team of researchers is identifying weather patterns that produce severe nighttime weather and exploring how the patterns are impacted by local topography.

"Being able to work with highly regarded researchers allows me to use much of the training I've received at St. Cloud State while proving that I'm worthy of being a member of the meteorological world," said Dux.

Previous studies—including some by Weisman, former SCSU students, and WFO FSD staff—indicate that severe weather in South Dakota often occurs during nighttime and early morning hours. "It's difficult to accurately predict the location and severity of overnight thunderstorms," said Weisman. "Given this difficulty, severe weather watches—if issued at all—provide little time for individuals in the affected area to get to safety."

Weisman believes the project will lead to improved forecasting techniques, enabling meteorologists throughout the Midwest to anticipate and warn for severe weather that will occur between 11 p.m. and noon.

Dux will help present the team's findings at various conferences, including one for Northern Plains forecasters in fall 2004. "When the final research is completed and presented, I'd like to be able to say that I've brought a high level of respect to the SCSU meteorology program and to have others recognize what a wonderful program it is," he said.

Financial support for the project has been provided by the University Corporation for Atmospheric Research through a grant from the National Oceanic and Atmospheric Administration.

SCSU undergraduate and graduate degrees balance strong liberal arts programs and foundations with specialized career preparation. The university offers its 15,500 students 175 majors, minors and pre-professional programs in Business, Education, Fine Arts and Humanities, Science and Engineering, and Social Sciences, and 50 master's degrees through its School of Graduate Studies.

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