

Grant to support Weisman's, students' research

The National Science Foundation has approved a \$94,000 grant to support research by meteorologist Bob Weisman of SCSU's earth sciences department.

Student assistants will play key roles in the three-year "Precipitation Regimes Associated with Inverted Troughs" project.

Weisman is researching poorly forecasted weather features in the Northern Plains states. He has found that rainfall and snowfall under certain conditions involving inverted troughs are not as easy to predict as work by other researchers has indicated.

Storms with inverted troughs tend to pose forecast problems for two reasons: 1) they don't drop the heaviest snow in the usual places relative to the storm; and 2) they have been associated with some of the most notorious storms in recent history, including Minnesota's Halloween blizzard of 1991. These types of storms also were involved in the heavy snowfall in Minnesota and North Dakota that led to this year's flooding along the Red and Minnesota rivers.

The goal of this research is to determine why the heavy snow or rain is in different places for different storms so that forecasts can be improved. Already, companion studies with the National Weather Service offices in the eastern Dakotas and Minnesota are being developed because of great interest in this work by local forecasters.

The bulk of the NSF funding will go to student assistants who will help with the research and will be able to present their findings at national conferences. Keith McGregor, a 1996 SCSU graduate, assisted with the preliminary study. McGregor also presented the results at the Minnesota Academy of Sciences Annual Meeting and at a regional Winter Weather Workshop at the University of Wisconsin. His research helped him get a graduate assistantship at the University of California-Davis.

This is Weisman's second NSF grant funded at SCSU. He published his results in the journal, *Weather and Forecasting*, in June 1996.