VORTEX2 Status Update: 07 April 2008

VORTEX2 will be the largest and most ambitious attempt to explore tornadoes, their origins, their structure and evolution, and how to increase the accuracy and timeliness of tornado forecasts and warnings.

The VORTEX2 project is described in detail in various documents linked to the VORTEX2 www site at www.vortex2.org. The most recent versions of the Scientific Project Overview (SPO) and Experimental Design Overview (EDO) provide the most comprehensive descriptions.

The National Science Foundation (NSF) has approved VORTEX2 in concept and encouraged both planning for VORTEX2 and submission of individual scientific proposals linked to VORTEX2. Approximately 20 VORTEX2-related proposals were submitted by various scientists and institutions in late 2007 and early 2008. NSF is in the final stages of making decisions concerning whether and to what extent to fund these proposals.

The National Oceanic and Atmospheric Administration (NOAA) has approved funding for various projects supporting the NOAA mission and the participation of NOAA scientists and instrumentation in VORTEX2.

The first field phase of VORTEX2 is planned for Spring 2009. It is anticipated that approximately 30 vehicles and 50 scientists and students will participate in field activities. Mobile and deployable instrumentation that is likely to be employed include:

A. Mobile radars: DOW6, DOW7, Rapid-Scan DOW, SMART-Radar-1, SMART-RADAR-2, NOXP, UMASS-X, UMASS-W, CIRPAS [9 mobile radars total]
B. Deployable instrumentation: Tornado-PODs (12) Sticknets (24) [36 platforms total]
C. Unmanned instrumented aerial system
D. MGAUS mobile ballooning facilities: NSSL MGAUS (2), NCAR MGAUS (2) [4 total]
E. Mobile mesonets: 6 dedicated, 3 deploying PODS [9 vehicles total]

In addition an extensive array of fixed instrumentation based in Oklahoma will be integrated when severe weather systems cross that region. These include:

A. Norman Phased Array Radar
B. CASA radar array
C. Oklahoma mesonet
D. KOUN dual-polarized WSR-88D

Other research efforts related to VORTEX2 include damage surveying, photogrammetry, mobile disdrometry, and numerical simulation efforts.

Information concerning the funding status of individual proposals should be directed to the specific investigators or NSF.

The VORTEX2 steering committee, who can answer many questions related to the goals and planning of VORTEX2, is:

Howie Bluestein: University of Oklahoma
David Dowell, National Center for Atmospheric Research
Yvette Richardson, Pennsylvania State University
Lou Wicker, NOAA
Don Burgess, Coop. Inst for Mesoscale Meteor. St., OU
Paul Markowski, Pennsylvania State University
Erik Rasmussen, Rasmussen Systems
Joshua Wurman, Center for Severe Weather Research