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“OU-Prime” captures information from February tornado

By: Bryan Painter/NewsOK.com

NORMAN-- “OU-Prime”, the highest resolution research radar of its kind in the world, had been in operation only about two weeks before capturing information from a Feb. 10 tornado that struck Oklahoma City and Edmond.

While there are those who look at the present, others are focusing on the future at the National Weather Center.

In the National Weather Service's Norman Forecast office, meteorologists were using current technology as well as visual reports to forecast and issue watches and warnings regarding the storms as they developed Feb. 10 throughout their 48 counties in central, western and southern Oklahoma and eight counties in west, north Texas, or rather the Wichita Falls area.

However, Bob Palmer and other researchers were using “OU-Prime” to help make a difference in the future.

The radar is located just east of the National Weather Center in Norman. Palmer, director of OU's Atmospheric Radar Research Center, said that on Feb. 10, staff members were controlling the radar from the weather center and directed OU-Prime so that it could capture rapid updates of the storm at Edmond.

This marked the first severe storm information collected with OU-Prime.

“We will use the radar for engineering development work,” Palmer said, “which will help improve future weather radar systems. It will also be used for both meteorological and engineering education through our Weather Radar Curriculum.”

Palmer points out that this educational program is “unique in the world” because it is interdisciplinary work between the School of Meteorology and the School of Electrical and Computer Engineering at the University of Oklahoma.

OU-Prime is a C-band, high-resolution, dual-polarized radar. C-band is the frequency of

operation. Most television stations use C-band and the Federal Aviation Administration's Terminal Doppler Weather Radars use C-band.

Palmer said high-resolution means they can see more of the fine details of storms. Dual-polarized means to send two different orientations of electromagnetic energy so it will be possible to tell the difference for example between hail and rain and it will be better to estimate rainfall amounts.

So, OU professors, scientists, engineers and students will be able to use the information gathered by this radar. How? In addition to severe weather, they can use it for studies including clouds, smoke, fire weather, bird detection and tracking, moisture measurements and so on.

It has much better sensitivity to clouds than the nation-wide NEXRAD radars, according to information from the Atmospheric Radar Research Center. This allows earlier sensing of cloud formation leading to severe weather.