

Operational Use of the West Texas Lightning Mapping Array at WFO Lubbock Meteorological Applications of Lightning Data

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The implementation of the West Texas Lightning Mapping Array (WTLMA) by the Atmospheric Science Group at Texas Tech has provided operational forecasters at the NWS office in Lubbock, TX real-time data since spring 2012. After undergoing training, also developed by Texas Tech and specifically for the NWS, meteorologists have used the total lightning data for a variety of applications in daily operations and in collaborative research with Texas Tech University. Real-time WTLMA point source data is currently displayed in the New Mexico Tech LiveLMA display with forecasters responding favorably to viewing data in this format, and preliminary work has been done on ingesting gridded WTLMA data into AWIPS-II with help from the National Severe Storms Lab. . The purpose of this presentation is to illustrate the use of raw source data within LiveLMA and gridded data within AWIPS-2 during forecast and warning operations. Correlation of the LMA data and storm-scale features in developing convection, microburst producing multicellular storms, within merging supercell storms, transitions in convective modes, and other weather typical of West Texas will be shown.