

# **Evolution of Environmental Conditions Supportive of Tornadoic Supercells on 11 June 2008**

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## **ABSTRACT**

A severe weather outbreak occurred from the Central Plains to the Upper Mississippi River Valley region during the afternoon and evening hours of 11 June 2008. This study will focus on the severe weather event from central into northeast Kansas, including a persistent supercell storm which produced 4 significant tornadoes (EF2 or greater). These tornadoes affected the Kansas communities of Salina, Chapman, Manhattan, and Soldier after 0200 UTC, when the presence of nocturnal boundary layer cooling is typically present. An investigation into the convective environment and its evolution will be presented, particularly the augmentation of the low level thermodynamic and kinematic fields through the event. Additionally, an examination of reflectivity and velocity signatures utilizing WSR-88D data will be conducted. A review of tornado paths and damage images will be shown to highlight the impact and significance of the episode.