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Abstract

The Hail Outbreak of 02 May 2003: An Overview of One of Alabama's Costliest Hailstorms

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During the afternoon hours of 02 May 2003, one of the costliest hailstorms in Alabama history hit parts of North Alabama. Reports of hail to the size of baseballs or larger were common during the event. This produced significant damage to roofs and automobiles.

A review of this case was conducted with a heavy emphasis on storm scale evolution and morphology. Of particular interest were the boundary interactions that led to storm initiation, the high CAPE values that were present, and the unidirectional shear profiles that led to multiple splitting supercells. Although significant rotational couplets and velocity signatures were present in many of the storms, very little wind damage and no tornadoes were reported on this day. A brief review of the near-storm boundary layer profiles and its impact upon the observed severe weather will also be discussed.