

A Rare Winter Supercell Produces an EF1 'Snownado'

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On November 23, 2013, a lone supercell thunderstorm developed over southern Ontario, Canada, and generated a brief tornado that caused damage rated at EF1 on the Enhanced Fujita Scale. What is unique about this event is that all air temperatures in the area were below 0C, and the tornado occurred in the presence of snow and graupel. In fact, dual-polarization data from the nearby TYX NEXRAD radar in Montague, New York, suggest that precipitation associated with the supercell was frozen - mainly ice crystals with a graupel storm core. Despite the presence of ice crystals and graupel, no lightning was detected with this storm. The goal of the presentation is to extend our understanding of the spectrum of supercell characteristics and environments in order to improve severe weather forecasting and nowcasting.