

## Hurricane Sandy (2012): A Multiscale Analysis and Perspective

by

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Hurricane Sandy made landfall in New Jersey near 0000 UTC 30 October 2012. Hurricane Sandy was a very high-impact storm that devastated neighborhoods, businesses, and infrastructure (especially in the New York City metro area). A Hurricane Sandy-induced storm surge that exceeded 4.0 m in some areas (e.g., New York harbor) caused most of the devastation and killed the majority of the more than 100 people who perished in the storm. Others died when wind gusts that exceeded hurricane force toppled trees onto homes and cars in several areas (e.g., Long Island and New Jersey).

Motivated by the widespread devastation and high loss of life produced by Hurricane Sandy, the author decided to offer a graduate level research class during the spring 2013 semester devoted to a multiscale “soup-to-nuts” analysis of the storm. A total of 13 graduate students are registered for this class. Several UAlbany faculty members whose graduate students are in the class are also participating in the class.

Our class multiscale analysis of Hurricane Sandy will have six research components: 1) pre-genesis phase, 2) genesis, intensification and northward movement phase, 3) Sandy-trough/subtropical jet interaction and coastal jog phase, 4) Sandy track uncertainty (coastal landfall vs. out to sea) phase, 5) hybrid Sandy and warm seclusion resulting from a second and stronger Sandy-trough interaction phase, and 6) mesoscale structure at landfall, post-landfall Sandy-frontal band interaction, and Sandy-mountain interaction phase. This presentation will document results from our multiscale analyses of these six research components and give our perspective on this historical extreme weather event.