

**INVESTIGATING MESOCYCLONES THAT FORM ONSHORE  
AND OFFSHORE OF THE TALLAHASSEE AREA**

National Weather Service Forecast Office—Tallahassee

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The Tallahassee Forecast Office of the National Weather Service is responsible for the safety of mariners on the adjacent waters of the Gulf of Mexico. When conditions warrant, the Office issues a special marine warning covering a defined area and time period. These warnings mostly are determined by examination of WSR-88D Doppler radar-derived radial velocities. In some cases the radial velocities indicate the presence of rotation, i.e., a couplet of inbound and outbound velocities known as a mesocyclone. The forecasting question becomes “Will the Doppler couplet move onshore and require the issuance of a tornado warning? Or will the couplet dissipate before reaching the coastline? My research has three major objectives 1) What are the environmental and storm characteristics that are associated with maritime storm rotation? 2) What characteristics are associated with landfalling areas of rotation that survive the landfall? 3) What are the similarities and differences between mesocyclones that form over the Gulf and those that form over the adjacent coastal regions?