

More category 5 hurricanes forecasted by scientists

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In the midst of hurricane season, climatologists around the world are monitoring tropical storm formations that have the potential to escalate into deadly hurricanes. The Atlantic hurricane season included 17 named

storms last year, many of which proved to be costly and destructive for communities in their path. Hurricanes are becoming stronger and wetter due to rising sea and air temperatures. Saharan dust storms can also play a role in hurricane formation. Researchers at Chapman University have learned from studying 2012's Hurricane Sandy, that we are more likely to see larger, more powerful hurricanes in the future.

"Although Sandy was a Category 3 storm when it made landfall in Cuba, it became the largest Atlantic hurricane on record when measured by diameter, with winds spanning 900 miles," said Chapman University Climatologist Hesham El-Askary, Ph.D.

A Saharan dust event occurring in West Africa weeks before Sandy had formed carried large amounts of mineral dust into the troposphere, filling the tropical wave that became Sandy with aerosols along a majority of its path. By monitoring dust storms, Dr. El-Askary was able to tie this occurrence to the role it played in the hurricane's development from a Category 1 to a Category 3 storm. With this work, he hopes to provide more accurate forecasting for these types of extreme weather occurrences.

More information: Andrew T. Fontenot et al, Characterizing the Impact of Aerosols on Pre-Hurricane Sandy, *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing* (2018). [DOI: 10.1109/JSTARS.2018.2813095](https://doi.org/10.1109/JSTARS.2018.2813095)

Provided by Chapman University

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