

Analyzing the Record-Breaking 2020 Atlantic Hurricane Season

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The 2020 Atlantic hurricane season was very active in terms of the number of storms, with a record-breaking 30 tropical storms, 14 hurricanes, and 7 major hurricanes. Other measures of hurricane activity include the accumulated cyclone energy (ACE), number of hurricanes and major hurricanes, and storm duration. To gain a better understanding of the season's overall activity, we conducted statistical analyses of these measures using the National Hurricane Center's Best Track Data. When measuring hurricane activity by the number of storms, 2020 was the most active, but considering other factors, such as accumulated cyclone energy (ACE), which is an integrated measure that combines the strength and duration of a storm, 2020 was not the most active, especially when compared to other known active seasons, such as 2005. Additionally, hurricane activity is impacted significantly by the surrounding environmental and atmospheric conditions, such as El Niño Southern Oscillation (ENSO). Analysis of data outputted by the Statistical Hurricane Intensity Prediction Scheme (SHIPS) model indicated the environmental conditions in the tropical Atlantic favorable to hurricane intensification in 2020, 2005, and throughout the historical record.