Colorado State University (CSU) Atlantic Hurricane Season Forecast

Philip Klotzbach and Michael Bell of Colorado State University (CSU) have issued their June forecast for the 2017 Atlantic Hurricane Season. The forecast calls for 14 named storms, 6 hurricanes and 2 major (Category 3+) hurricanes between the months of June and November. This seasonal forecast includes Tropical Storm Arlene, which developed in the North Atlantic Ocean in April.

With the release of the forecast, Klotzbach and Bell are predicting slightly above average tropical cyclone activity in the Atlantic Basin. The report cites several factors as to why such activity is being forecast. One main factor is the situation surrounding current ENSO-neutral (El Niño Southern Oscillation) conditions. There is considerable uncertainty regarding a possible transition to a weak El Niño by the peak of the Atlantic Hurricane Season (i.e. August to October). Most of the dynamical model guidance is currently calling for either weak El Niño or ENSO-neutral conditions by the late summer/early fall. Thus, CSU believes that the most realistic scenario for the 2017 Atlantic hurricane season is borderline warm ENSO-neutral to weak El Niño conditions in the coming months.

A second factor revolves around the current unusual sea surface temperature (SST) anomaly pattern in the North Atlantic. The pattern shows a cold far North Atlantic, very warm anomalies off the US East Coast, and warm anomalies in the subtropical eastern Atlantic that extends into the tropical Atlantic. Such a pattern has historically favored a more active season. Separately, CSU is comparing these conditions in relation to the strength of the Atlantic Multi-decadal Oscillation (AMO). Based on their own analysis technique, the AMO has been in a negative phase since 2014, though it is anticipated that slightly positive AMO conditions will return later in June.

As an addendum, Dr. William Gray pioneered seasonal hurricane forecasting and countless landmark hurricane research while at Colorado State University. He issued the first Atlantic Hurricane season forecast in 1984. Dr. Gray remained active in the field until his passing in April 2016.

The tables below show the CSU forecast, including probabilities of landfall on the United States mainland. The full report is available at CSU's Tropical Meteorology webpage (<u>http://tropical.atmos.colostate.edu/</u>). The next forecast update is expected on Friday, August 4, 2017.

CSU Atlantic Basin Hurricane Season Forecast (June 1 – November 30)

Forecast Parameter	Average Year	2017* (April 2017)	2017* (June 2017)
Named Storms	12.0	11	14
Named Storm Days	60.1	50	60
Hurricanes	6.5	4	6
Hurricane Days	21.3	16	25
Major Hurricanes	2.0	2	2
Major Hurricane Days	3.9	4	5
Accumulated Cyclone Energy (ACE)	92	75	100
Net Tropical Cyclone Activity	103%	85%	110%

Source: Colorado State University

*Seasonal forecast includes April 2017's Tropical Storm Arlene



CSU Major Hurricane Landfall Probabilities (June 1 – November 30)

Forecast Parameter	Average Year	2017 (April 2017)	2017 (June 2017)
Entire U.S. Coastline	52%	42%	55%
U.S. East Coast (including FL Peninsula)	31%	24%	33%
U.S. Gulf Coast (FL Panhandle to Brownsville, TX)	30%	24%	32%

***Expected 44% risk of major hurricane tracking into the Caribbean

Source: Colorado State University

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