

Hurricane Irma Meteorological Information

Dr Phil Klotzbach (Colorado State University)

Phil is a long-term Research Fellow of Risk Frontiers who is also a [Research Scientist](#) at the Department of Atmospheric Science at Colorado State University (CSU). Phil produces Atlantic basin seasonal hurricane forecasts that he previously co-authored with Dr. William Gray. He developed both the two-week forecasts that are issued during the peak months of the hurricane season (August-October) and the Landfalling Hurricane Probability Webpage (available online at <http://www.e-transit.org/hurricane>) in partnership with the GeoGraphics Laboratory at Bridgewater State College.

Below is the current content from Phil's notable facts recap of Hurricane Irma which he is [updating every 12 hours](#).

Hurricane Irma Meteorological Records/Notable Facts Recap (through September 7 at 11am EDT)

Note: Lifetime refers to storm lifetime to date

Intensity Measures

- 185 mph lifetime max winds – tied with Florida Keys (1935), Gilbert (1988) and Wilma (2005) for second strongest max winds of all time in Atlantic hurricane. Allen had max winds of 190 mph in 1980

- 185 mph lifetime max winds – making it the strongest storm on record to impact the Leeward Islands, defined as 15-19°N, 65-60°W for this calculation. Okeechobee Hurricane (1928) and David (1979) were previous strongest at 160 mph

- 185 mph lifetime max winds – the strongest storm to exist outside of the Caribbean and Gulf of Mexico on record

- 185 mph max winds for 37 hours – the longest any cyclone around the globe has maintained that intensity on record. The previous record was Haiyan in the NW Pacific at 24 hours

- 914 mb lifetime minimum central pressure – lowest since Dean (2007) and 10th lowest in satellite era (since 1966)

- 914 mb lifetime minimum central pressure – lowest pressure by an Atlantic hurricane outside of the western Caribbean and Gulf of Mexico on record

- First Category 5 hurricane in the Atlantic since Matthew (2016) and first Category 5 hurricane in the tropical Atlantic (7.5-20°N, 60-20°W) since Hugo (1989)

- 2.25 days as a Category 5 hurricane – 4th longest Atlantic hurricane at Cat. 5 strength on record

Integrated Measures

- Generated the most Accumulated Cyclone Energy by a tropical cyclone on record in the tropical Atlantic (7.5-20°N, 60-20°W)

- Generated more Accumulated Cyclone Energy than the first eight named storms of the Atlantic hurricane season (Arlene-Harvey) combined

- Generated the most Accumulated Cyclone Energy in a 24-hour period on record, breaking old record set by Allen (1980)

- Generated the most Accumulated Cyclone Energy by a named storm forming in August since Frances (2004)

- 44.2 Accumulated Cyclone Energy units so far – the 11th most by an Atlantic hurricane in the satellite era (since 1966)

- Generated more Accumulated Cyclone Energy than 12 entire Atlantic hurricane seasons in the satellite era (since 1966)

- Generated 3.75 major hurricane days in the tropical Atlantic (7.5-20°N, 60-20°W) – trailing only Luis (1995) for major hurricane days in the tropical Atlantic

Editor's note: [Accumulated Cyclone Energy](#) (ACE) – the ACE index is a wind energy index, defined as the sum of the squares of the maximum sustained surface wind speed (knots) measured every six hours for all named storms while they are at least tropical storm strength.