



Weather Research Center



5104 Caroline Houston, Texas 77004 Phone: 713-529-3076 Fax: 713-528-3538 E-mail: wrc@wxresearch.org

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For information, contact: 713-529-3076

WRC's 2006 Hurricane Prediction verifies again this year

Houston (2006) – According to Jill Hasling, Certified Consulting Meteorologist at Houston's Weather Research Center (WRC), the Center's 2006 Hurricane Prediction verified with the landfall of Tropical Storm Ernesto in North Carolina. Also the Center's prediction was best of the season for the number of expected named storms. In March 2006, WRC's OCSI model forecasted that there would be at least 11 named storms in the Atlantic this year with at least 5 of them intensifying into hurricanes. There were 9 names storms with 5 intensifying into hurricanes, [Hurricane Ernesto, Hurricane Florence, Hurricane Gordon, Hurricane Helene, Hurricane Isaac]. Dr. William Gray's April 2006 forecast called for 17 named storms of which 9 would intensify into hurricanes and NOAA's May 2006 forecast predicted 13 to 16 named storms with 8 to 10 becoming hurricanes.

NAME	DATES	INTENSITY	CAT	LOWEST PRESSURE	MAX WIND	LANDFALL
				MBS	KTS	
ALBERTO	10 – 14 June	Tropical Storm		995	60	Adams Beach, FL
BERYL	18 – 21 July	Tropical Storm		1001	50	Nantucket, MA
CHRIS	1 – 5 August	Tropical Storm		1001	55	
DEBBY	21 – 27 August	Tropical Storm		1000	45	
ERNESTO	24 Aug – 1 Sep	Hurricane	1	988	65	Cuba, Southern Tip of FL & Long Beach, NC
FLORENCE	3 – 12 Sep	Hurricane	1	972	80	
GORDON	10 – 20 Sep	Hurricane	3	955	105	
HELENE	12 – 24 Sep	Hurricane	3	954	110	
ISAAC	27 Sep – 2 Oct	Hurricane	1	985	75	

WRC meteorologist's forecast indicated that at least 5 hurricanes would form during the season and that at least 4 tropical storms or hurricanes would make landfall somewhere along the U.S. Coast. There were 3 US landfalls: Tropical Storm Alberto in June which made landfall on the west coast of Florida, Tropical Storm Beryl in July which moved over Nantucket, Massachusetts, and Tropical Storm Ernesto in August which made landfall on the southern tip of Florida, continued moving through Florida and finally moved offshore to make landfall again in North Carolina.

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WRC meteorologist Jill F. Hasling had stated that the highest risk for landfall of tropical cyclones this year would be along the southeast coast of the United States and the west coast of Florida. The OCSI predicted that the US coast from Georgia to North Carolina had a 90% chance of experiencing the landfall of a tropical storm or hurricane followed by the west coast of Florida which had a 70% chance. Both of these forecasts were verified with Tropical Storms Alberto, Beryl, and Ernesto.

The Houston-based Weather Research Center is one of a handful of organizations that make predictions each season. WRC uses a model called Orbital Cyclone Strike Index (OCSI) which uses the solar cycle to predict the hurricane season. The OCSI model is based on the premise that there are orbital influences that are reflected in the global circulation pattern on the sun and subsequently the global circulation pattern of the earth. The sun's orbit influences the sun spot cycle. The 2006 Atlantic hurricane season marked the start of a new Phase in the OCSI which then allows the Center's meteorologists to predict the Atlantic hurricane activity through at least 2015. The 2006 sunspot minimum marks the time to begin a new cycle starting with Phase 1 in the OCSI. If 2006 is the year of the sun spot minimum, then the OCSI is reset to Phase 1 which also includes other years when the sunspot minimum occurred: 1878, 1889, 1901, 1913, 1923, 1933, 1944, 1954, 1964, 1976, 1986, and 1996. The tropical cyclone landfalls that occurred in these years are then used to calculate the probabilities of landfall on certain sections of the United States coast in percent.

Below is the probability of a tropical storm or hurricane making landfall on the section of the North American coast indicated. The percentages shown under Climatology are the risk of experiencing a tropical storm or hurricane on that particular coast in any year. This percentage is calculated by taking the number of years since 1871 that particular section of the coast has experienced a landfall of a tropical storm or hurricane, divide it by the total number of years since 1871 and multiply by 100. For example 40% of the years from 1871 to 1985 had a tropical storm or hurricane make landfall.

2006 WRC OCSI FORECAST FOR THE ATLANTIC

COAST	WRC OCSI	CLIMATOLOGY	OBSERVED
Mexico	40%	40%	
Texas	40%	51%	
Louisiana to Alabama	60%	59%	
West Florida	70%	71%	Alberto, Ernesto
East Florida	40%	41%	
Georgia to N. Carolina	90%	56%	Ernesto
East Coast of US	60%	36%	Beryl, Ernesto
Gulf Oil Blocks	90%	88%	

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Secondary 2006 Predictors from the OCSI:

	Forecast	Observed [10/3/06]
Number of Named Storms :	11	9
Number intensifying into Hurricanes:	5	5
Number of Hurricane Days:	28	18.5
US Landfalls:	4	3
Cat 3 or Higher Storms:	50%	Gordon Helene

During the 22-year period from 1985 to 2006, there have only been three years (1987, 1992, and 1999) when a storm or hurricane did not make landfall in the section of the United States coastline that had the highest risk. In all three of these years cyclones made landfall in the section of the coast with the second highest risk. This gives the OCSI an 86% accuracy rate.

The outlook for 2007 unfortunately gives the Louisiana to Alabama coast the highest probability of experiencing a landfall of a tropical storm or hurricane with a 70% chance. The second highest risk will be for the west coast of Florida and the Georgia to North Carolina coast each with 60% chance.

The secondary predictors are for the number of named storms and how many will intensify into hurricanes. For the 2007 Atlantic hurricane season we are expecting 7 named storms of which 4 are expected to intensify into hurricanes. We are expecting 3 of these 7 storms to make landfall somewhere along the United States Coast.

2007 WRC OCSI FORECAST FOR THE ATLANTIC

COAST	WRC OCSI	CLIMATOLOGY
Mexico	40%	40%
Texas	40%	51%
Louisiana to Alabama	70%	59%
West Florida	60%	71%
East Florida	30%	41%
Georgia to N. Carolina	60%	56%
East Coast of US	30%	36%
Gulf Oil Blocks	80%	88%

Secondary 2007 Predictors from the OCSI:

	Forecast
Number of Named Storms :	7
Number intensifying into Hurricanes:	4
Number of Hurricane Days:	7
US Landfalls:	3
Cat 3 or Higher Storms:	50%

The OCSI was developed by meteorologists, Dr. John C. Freeman and Jill F. Hasling. This index has been used since 1985 to make annual hurricane season forecasts of which section of the North American coast has the highest risk of experiencing a tropical storm or hurricane.

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In addition to its ongoing research, WRC also provides storm and hurricane information via the Internet through Storm Navigator®. This service helps provide detailed storm updates and related information. WRC's current and past predictions can be found at www.wxresearch.com/outlook.

Founded in 1987, the non-profit Weather Research Center manages a worldwide forecasting operation and provides groundbreaking research to scientists around the world. Meteorologists work on severe weather advisories, marine forecasts, long-range outlooks, environmental studies and forensic meteorology services. Weather Research Center provides research into tropical cyclones as well as real-time weather forecasts. President Jill F. Hasling is a Fellow and Certified Consulting Meteorologist from the American Meteorological Society as well as a member of the National Council of Industrial Meteorologists.

For more information about the John C. Freeman Weather Museum at Weather Research Center, please call (713) 529-3076 or logon to www.wxresearch.org.

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