Weather Research Center

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

For Immediate Release
March 15, 2007
For information, contact: 713-529-3076

WRC's 2007 OCSI Atlantic Hurricane Prediction Gives the Louisiana to Alabama Coast the Highest Risk of a Landfall of a Tropical Storm or Hurricane But Only Predicts 7 Cyclones in the Atlantic

Houston (2006) – "The Louisiana to Alabama coast has the highest risk of experiencing the landfall of a tropical storm or hurricane this year", according to Jill Hasling, Certified Consulting Meteorologist at Houston's Weather Research Center (WRC). The secondary predictors call for a total of 7 named storms with 4 of these named storms intensifying into hurricanes. The number of expected cyclones is not as important as where the cyclones will make landfall.

2007 WRC OCSI LANDFALL RISK FORECAST FOR THE UNITED STATES COAST

COAST	WRC OCSI	CLIMATOLOGY
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 WRC's OCSI:	Forecast
Number of Named Storms :	7
Number of Storm Days:	47
Number intensifying into Hurricanes:	4
Number of Hurricane Days:	7
US Landfalls:	3
Cat 3 or Higher Storms in the Atlantic:	50%

The OCSI indicates that this could be a long season with a chance of a May cyclone as well as a cyclone as late as November. The break probabilities by month for a cyclone in any month is as follows:

May	10%
June	50%
July	30%
August	80%
September	100%
October	100%
November	40%

The Houston-based Weather Research Center is one of a handful of organizations that make seasonal hurricane predictions. WRC uses a model called Orbital Cyclone Strike Index (OSCI) which uses the solar cycle [an indication of the solar systems orbit] to predict the risk for coastal residents each 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 as well as the global circulation pattern of the earth. These orbital influences are reflected in the 11.1 year sun spot cycle.

The 2007 Atlantic hurricane season is the second phase of the new sun spot cycle which started in 2006 making this Phase 2 of the Orbital Cyclone Strike Index [OCSI]. The OCSI is used by the Center's meteorologists to predict the Atlantic hurricane activity through at least 2015. Other years in Phase 2 in the OCSI are 1879, 1890, 1902, 1914, 1924, 1934, 1945, 1955, 1965, 1977, 1987, and 1997. 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.

Significant hurricanes during the Phase 2 years of the OCSI were:

1879 Category 3 hurricane – Central Louisiana
1945 Category 4 hurricane – Central Texas
Category 3 hurricane – East Florida
1955 Category 5 hurricane – Western Caribbean
1965 Hurricane Betsy – New Orleans, Louisiana
1977 Hurricane Anita – Category 5 off the North Mexican Coast

During the 23-year period from 1984 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 87% accuracy rate.

The OCSI was developed by Houston meteorologists, Dr. John C. Freeman and Jill F. Hasling. This index has been used since 1984 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.

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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