



NOAA's National Climatic Data Center

<http://www.ncdc.noaa.gov/oa/climate/research/2005/katrina.html>

Hurricane Katrina

Hurricane Katrina developed initially as tropical depression (TD) #12 of the season in the southeastern Bahamas on August 23rd. This tropical depression strengthened into Tropical Storm Katrina the next day. It then moved slowly along a northwesterly then westerly track through the Bahamas, increasing in strength during this time. A few hours before landfall in south Florida at around 6:30 EDT on August 25th, Katrina strengthened to become a category 1 (wind speeds of 75 mph or greater) hurricane. Landfall occurred between Hallandale Beach and North Miami Beach, Florida, with wind speeds of approximately 80 mph. Gusts of above 90 mph were measured as Katrina came ashore. As the storm moved southwest across the tip of the Florida peninsula, Katrina's winds decreased slightly before regaining hurricane strength in the Gulf of Mexico. Given that Katrina spent only seven hours over land, its strength was not significantly diminished and it quickly re-intensified shortly after moving over the warm waters of the Gulf. Katrina moved almost due westward after entering the Gulf of Mexico. A mid-level ridge centered over Texas weakened and moved westward allowing Katrina to gradually turn to the northwest and then north into the weakness in the ridging over the days that followed. Atmospheric and sea-surface conditions (an upper level anticyclone over the Gulf and warm SSTs) were conducive to cyclone's rapid intensification, which lead to Katrina attaining 'major hurricane' status on the afternoon of the 26th. Continuing to strengthen and move northwards during the next 48 hours, Katrina reached maximum wind speeds on the morning of Sunday, August 28th of 150 kts (category 5), and its minimum central pressure dropped that afternoon to 902 mb - the 4th lowest on record for an Atlantic storm. Although Katrina, at its peak strength was comparable to Camille's intensity, it was a significantly larger storm and impacted a broader area of the Gulf coast.



2005 Hurricane Katrina

Although tropical cyclones of category 5 strength are rarely sustained for long durations (due to internal dynamics), Katrina remained a strong category 4 strength hurricane despite the entrainment of dryer air and an opening of the eyewall to the south and southwest before landfall on the morning of the 29th. Landfalling wind speeds at Grand Isle, LA were approximately 140 mph with a central pressure of 920mb - the 3rd lowest on record for a landfalling Atlantic storm in the US.

The hurricane that devastated the U.S. Gulf Coast