

## Hurricane Katrina

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### Climate Change and Hurricanes

There is no evidence to suggest that climate change is increasing the number of hurricanes. However there have been some published results that suggest the intensity of hurricanes is increasing. It is quite a complex physical process, which is in part based on the idea that warmer sea surface temperatures will lead to more intense hurricanes. To show you how warmer sea surface temperatures can increase the intensity of hurricanes, here is an animation of Hurricane Katrina (produced by Paul James). Of course we are not suggesting that Katrina was a result of climate change, but this is a useful example of how hurricanes can intensify over warmer waters.

#### *More Details about this video animation*

The video animation shows the near surface (10m) winds and rainfall intensity over the Gulf of Mexico and the surrounding land areas during the main development phase of Hurricane Katrina, August 24-30, 2005, based on NCEP-GFS forecast model analyses. The wind arrows are advected by the wind field. Their plotted size becomes larger with increasing windspeed and they are also coloured according to windspeed with colours ranging from white to blue at moderate speeds to purple and red at speeds of Hurricane force and beyond. The colour field underneath the wind arrows shows the precipitation rate on a scale from 0 to 20 mm per hour, noting that peaks in rainfall intensity (which may have been far higher than 20 mm/hr at times in localised regions within the Hurricane circulation), are not resolved in this animation.

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**Source URL:** <https://test-accsys.rmets.org/weather-and-climate/hurricane-katrina>