IPRC Seminar

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## "The impact of climate model sea surface temperature biases on tropical cyclone simulations"

Tropical cyclones (TCs) are one of the most impactful natural hazards to people's life and economy, and improving forecast and future projection of TCs is one of the most important areas for the weather and climate research community. Previous studies show that sea surface temperature (SST) patterns both local to and remote from TC development regions are important drivers of the variability of TC activity on different timescales. Thus, reliable simulations and predictions of TC activity depend on a realistic representation of tropical SSTs. Nevertheless, severe SST biases are common to the current generation of global climate models, especially in the tropical Pacific and Atlantic, where TCs are active. Alleviating these SST biases has been proven challenging, leading to the prospect that the bias problem may persist for decades, even with improvements in our understanding of the causes of the biases and in reducing the biases in the newer version of climate models. It is, therefore, crucial to understand and evaluate the effects of the biases on simulations of climate extremes. Using an atmospheric-only tropical-channel model, we investigated the impact of SST biases on TC simulations. The results show significant influences from SST biases on TC simulations both in local basins and remote ocean basins.

**Tuesday, December 18, 2018 11:00 am - 12:00 pm, POST 414**