Performance Assessments of Hurricane Wave Hindcasts

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Plain word summary

This work uses wave measurements from the network of CDIP and NDBC buoys along the U.S East Coast to evaluate the performance of several operational wave models during six major hurricanes. Compared to the buoy measurements, the models consistently underestimate wave heights during the extreme hurricane conditions, but interestingly overestimate wind speeds in the same circumstances. Discrepancies in wave heights also increase substantially in waters shallow enough for shoaling, refraction, and dissipation to become important. The spatial distribution of errors within individual storms lead the authors to conclude that there is not just one source of systematic error among all storms, but rather multiple sources, with varying importance in each storm.

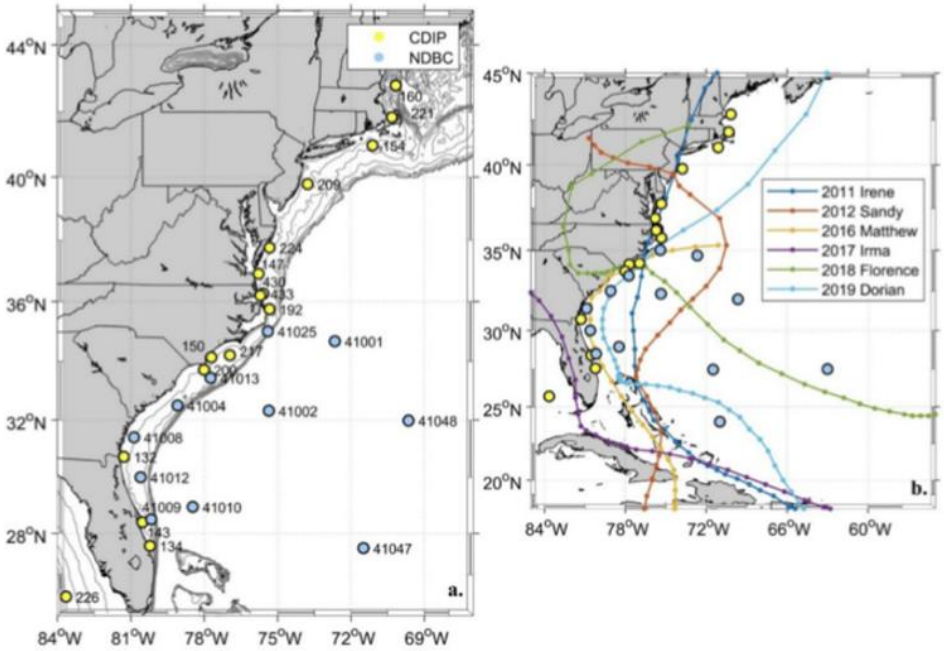

Figure 1. (**a**) Map of the Northern Atlantic Ocean showing CDIP and NDBC locations used in the study and (**b**) buoy location map overlaid with hurricane tracks assessed in this study.