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Title: Towards regional predictions of tropical cyclone activity and hydroclimate
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Abstract:
 Results with global coupled climate models, including a new high-resolution climate model targetted to the understanding, intraseasonal-to-decadal prediction and near-term projection of regional and extreme climate, are explored. Initialized predictions of global hurricane activity show skill on regional scales, comparable to the skill on basin-wide scales, suggesting that regional seasonal TC predictions may be a feasible target. The variation and prediction of regional hydroclimate globally, with a focus on the Caribbean/Gulf of Mexico and surrounding land regions are explored, including methods for maximizing prediction skill. It is shown that mean-state errors are a key constraint on the simulation and prediction of variations of regional climate and extremes, and methodologies for overcoming model biases are explored. Improvements in predictions of regional climate are due both to improved representation of local processes, and to improvements in the large-scale climate and variability from improved process representation.
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