



Tropical cyclone sensitivity to nearby convection. How convection tuning can improve forecasts of hurricanes Jose and Irma in a coupled NWP model.

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We test the sensitivity of the track forecast of hurricanes Jose and Irma to tuning of the convection scheme in coupled ocean-atmosphere forecasts using the Met Office UM model. Both hurricanes occurred in the Western Atlantic basin in September 2017. The track of hurricane Jose included an anti-cyclonic loop, which was poorly simulated by the Met Office forecast. We will show that by tuning the convection scheme to remove unrealistic deep convection to the West of the storm it improves the projected track. In contrast, the track of Hurricane Irma remained further south and was well forecast by the Met Office UM model but the forecast deteriorates when convection is modified with the same tunings as applied to Jose. In this case reducing the deep convection leads to a reduction in the strength of the subtropical high. We will present results of further tuning of the convection scheme to retain the good performance for Jose without deteriorating the performance of Irma and extend the testing to other storms during the 2017 hurricane season.