



## **Understanding Model Spread in CMIP5: Sensitivity of North Atlantic Storm Tracks to Surface Boundary Conditions**

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Previous studies have examined the CMIP5 multimodel ensemble projection of midlatitude storm track changes over the 21st century. These studies have noted an overall poleward projection of the North Atlantic storm track; however there is considerable spread amongst the CMIP models. In this study, we examine the extent to which ocean forcing/coupling affects to the ability of CMIP5 models to simulate the behavior of the North Atlantic storm tracks. The analysis highlights the relationships simulated from NorESM and CESM, which have similar atmospheric models but very different ocean components. A comparison of the RCP8.5 storm track projections suggest large differences in the magnitude, sign and location of the storm track changes over the North Atlantic. A suite of sensitivity experiments using multiple AGCMs are then used to examine the extent to which the spread in the North Atlantic sea surface temperatures are responsible for the spread in the North Atlantic storm tracks.