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Climate Drift in CCSM4 Decadal Prediction Experiment

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Initialization of climate models produces both signals carrying the initial information and climate drift. The signals we wish to detect are relatively subtle and can be contaminated by the drift. This motivates us to investigate how and why surface climate drifts at the 10-30 year time scale in CCSM4 decadal prediction experiments. Two techniques for generating initial conditions have been used for these experiment. One is the "hindcast" method in which the ocean model is run with observed 20th century atmospheric forcing. The other is by assimilating ocean observations into the model through the Data Assimilation Research Testbed (DART) method. We will compare drifts resulting from these two methods and investigate whether there is a linkage between the magnitude of the drift and predictive skill.