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# Atlantic Multidecadal Variability and North Atlantic Jet: a multi-model view from the Decadal Climate Prediction Project

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**Abstract/Excerpt**

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### Abstract

The influence of the Atlantic Multidecadal Variability (AMV) on the North Atlantic storm track and eddy-driven jet in the winter season is assessed via a coordinated analysis of idealised simulations with state-of-the-art coupled models. Data used are obtained from a multi-model ensemble of AMV± experiments conducted in the framework of the Decadal Climate Prediction Project component C. These experiments are performed by nudging the surface of the Atlantic ocean to states defined by the superimposition of observed AMV± anomalies onto the model climatology. A robust extra-tropical response is found in the form of a wave-train extending from the Pacific to the Nordic seas. In the warm phase of the AMV compared to cold phase, the Atlantic storm track is typically contracted and less extended poleward and the low-level jet is shifted towards the equator in the Eastern Atlantic. Despite some robust features, the picture of an uncertain and model-dependent response of the Atlantic jet emerges and we demonstrate a link between model bias and the character of the jet response.

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