

# Seasonal Predictability of the Winter North Atlantic Oscillation From a Jet Stream Perspective

Dr Antje Weisheimer

University of Oxford

Tess Parker, Tim Woollings, Antje Weisheimer, Chris O'Reilly, Laura Baker, Len Shaffrey

The winter NAO has varied on interannual and decadal timescales over the last century, associated with variations in the speed and latitude of the eddy-driven jet stream. Here we use hindcasts from two operational seasonal forecast systems and a century-long atmosphere-only experiment to relate seasonal prediction skill in the NAO to these aspects of jet variability. This shows that the NAO skill realized so far arises from interannual variations in the jet, largely associated with its latitude rather than speed. There likely remains further potential for predictability on longer, decadal timescales. In the small sample of models analyzed here, improved representation of the structure of jet variability does not translate to enhanced seasonal forecast skill.