Geophysical Research Abstracts
Vol. 16, EGU2014-6914-1, 2014
EGU General Assembly 2014

Latest decadal climate prediction research at the Met Office Hadley Centre

Nick Dunstone, Doug Smith, Adam Scaife, and Leon Hermanson
Met Office Hadley Centre (nick.dunstone@metoffice.gov.uk)

Here we present an overview of work, much of which is undertaken as contributions to the EU SPECS project, that explore mechanisms and hindcast skill using Met Office climate models and different versions of the DePreSys decadal prediction system. Here we focus on:
- showing skilful predictions of the North Atlantic sub-polar gyre region in decadal hindcasts. Furthermore, we present evidence and physical mechanisms for a shift in the forecast sub-polar gyre, that would suggest a forthcoming local cooling and examine the associated likely regional climate impacts,
- presenting results of experiments design to elucidate the possible impact of further anthropogenic reductions in Arctic sea-ice extent on atmospheric circulation on interannual to decadal timescales. A modest but significant negative NAO signal is seen in winter,
- finally, we present details, and preliminary results, from the new high-resolution Met Office DePreSys system, which is a major step towards a seamless monthly to decadal prediction system.