

Abstract: Millennial-scale climate flip-flops called Dansgaard-Oeschger (D-O) cycles punctuated the last ice age. These cycles were first discovered in the Greenland ice cores, where they appear as large, rapid warming and cooling episodes unlike anything else recorded in the last 120 thousand years. Sea ice has long been thought to play an important role in D-O cycles because of its strong influence on regional temperature and its ability to grow and melt rapidly in response to relatively weak forcings. Although some observational evidence exists to support this idea, it is not sufficient to constrain the characteristics of or mechanisms behind sea ice displacements during D-O cycles. This presentation will provide an overview of modelling experiments aimed at resolving some of these open questions.