

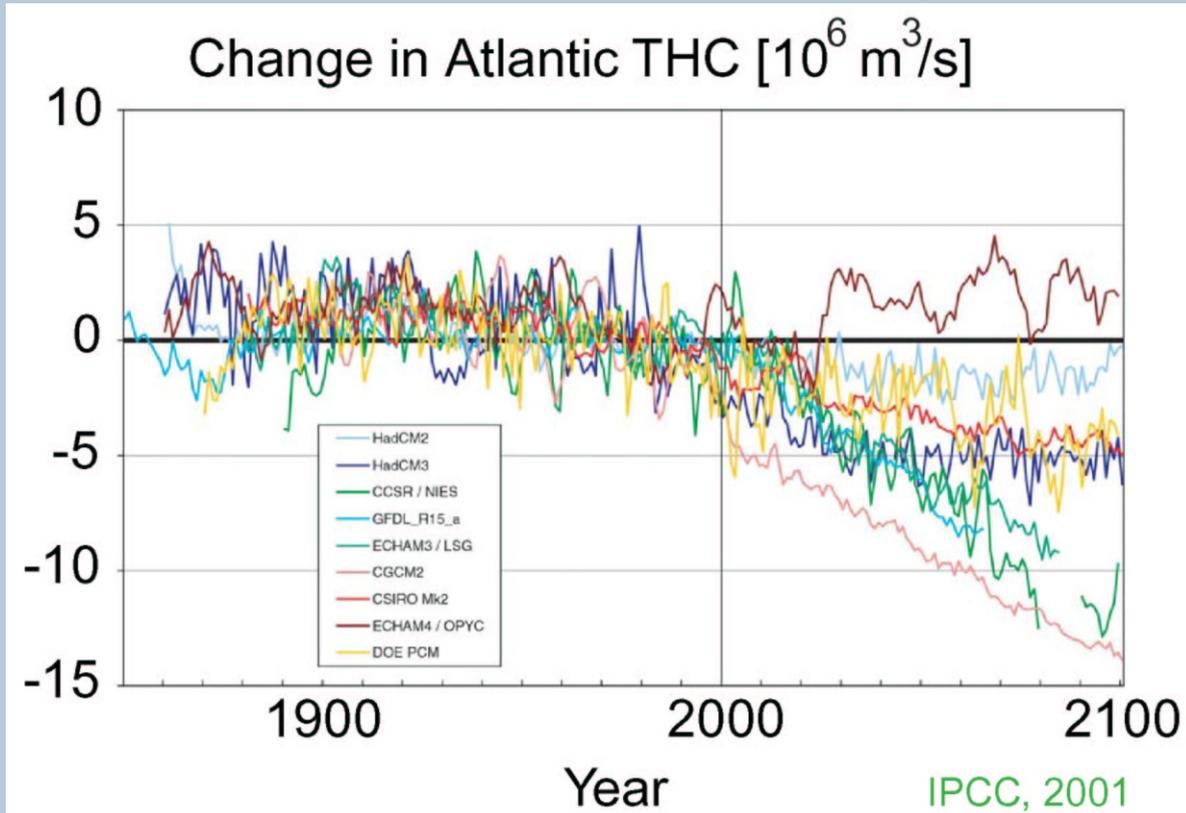


Rapid Climate Change

The Earth's climate is maintained through interactions between the atmosphere, oceans, ice and the land surface. Studies of past climate suggest that large and rapid (as fast as 10-20 years) changes have occurred and that changes in the transport of heat by the ocean, the thermohaline circulation (THC), are often a major factor.



Observations suggest that the THC may be changing but there are too few measurements to be sure. Model studies of global warming scenarios predict a diverse range of results for the future.

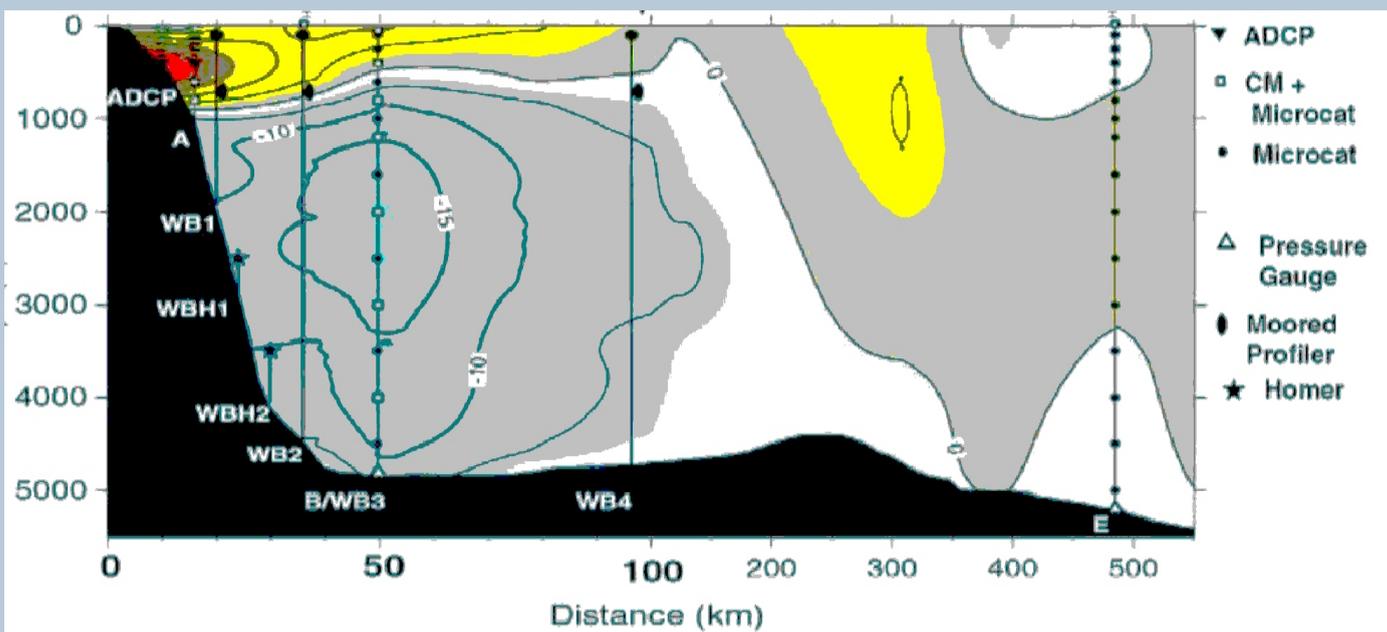


This graph shows the wide range of future global warming scenarios predicted by different climate models. There is a clear need to improve our understanding of climate change processes in order to reduce the disparity between the model predictions, and make accurate forecasts.

The RAPID programme aims to investigate and understand the causes of abrupt transitions from warm to cold conditions using a novel combination of present day observations, palaeo data and a hierarchy of models from a local to global scale.



The programme will run from 2003-2009, with 21 projects making observations of present day conditions; measuring past conditions through palaeo records in ice, sediment, bog and coral cores; and modelling past events. As a result, our ability to monitor and predict future rapid climate change, particularly in the North Atlantic region, will be enhanced.



Arrays of moored instruments will make continuous deep ocean observations over the next 5 years to provide data to test the models.

BODC's role

The RAPID programme will result in a large and diverse range of data. Data management will be provided by BODC and BADC. Data sharing and collaboration between projects is an important aspect of the RAPID science plan. During the lifetime of RAPID, the data centres will provide a focal point for co-operation between projects. It is expected that a final dataset DVD will be produced at the end of the project which will be a key source of information for future climate change research.

For more information, please visit the RAPID website:

<http://www.soc.soton.ac.uk/rapid/rapid.php>