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Heat and carbon uptake in the Southern Ocean: the state of the art and future priorities

Discussion meeting issue organised and edited by Andrew J.S. Meijers, Corinne Le Quéré CBE FRS, Pedro M.S. Monteiro and Jean-Baptiste Sallée

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About this issue

The Southern Ocean plays a critical role in our climate, acting as a central point of exchange for heat and carbon between the ocean and atmosphere. There have been significant advances in observing and modelling the Southern Ocean in the past five years. Results from new autonomous observing platforms and large national programmes have challenged our understanding of the role of the Southern Ocean in heat and carbon exchange and the wider global climate. This meeting brought together physical oceanographers, climatologists and carbon scientists to synthesise insights across disciplines and identify future challenges. This theme issue arising from the Discussion Meeting draws together new research and reviews of the state of the art.

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Cover image:

Iceberg with refrozen meltwater, sighted off east Antarctica during the BROKE-WEST expedition, 2006. Photo credit: Andrew Meijers

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