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Mid-depth ocean circulation in the Atlantic since the last glacial age

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Abstract

Thermohaline ocean circulation affects climate through redistributing heat on Earth's surface and changing atmospheric CO₂ content by altering carbon storage in deep oceans. Previous work has provided important knowledge about past circulation patterns in the deep Atlantic. However, paleo-data yield inconsistent conclusions about mid-depth circulation changes in the past. We propose to use deep water carbonate ion and carbon isotopes together to investigate Atlantic mid-depth ocean circulation changes since the last ice age. We believe our proposed work will provide important constraints on Atlantic mid-depth circulation changes in the past.