



Inventory of anthropogenic carbon in the Atlantic

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The Atlantic is an important sink for anthropogenic carbon (C_{ant}). High concentrations of C_{ant} are found not only in surface and central waters, but also in the newly formed North Atlantic Deep Water (NADW). The C_{ant} concentrations are calculated by means of the Transit Time Distribution (TTD) method, and the TTD parameters are inferred from CFC data using WOCE and CLIVAR hydrographic sections. The TTDs also give information on the spreading paths of water masses and the time scales of the interior flow. The repeated observations in the North Atlantic clearly indicate a decrease of the carbon uptake of Labrador Sea Water during the last decade. The deeper NADW layers, however, show the expected C_{ant} increase due to the rising atmospheric CO₂ concentrations.