



The circulation in the North Atlantic subpolar gyre

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Owing to its high sensitivity to atmospheric changes, the subpolar North Atlantic exhibits large natural variability in circulation and temperature / salinity patterns. Long-term contemporary time series of these quantities are needed to study the fluctuations and the processes involved and to separate and detect variability caused by anthropogenic warming in the future. A combination of shipboard and moored hydrographic observations, Argo and altimeter data combined with the results of a 1/20_ ocean model are used to study the exchange of the main components of the Atlantic meridional overturning circulation between the subtropical and the subpolar regime.