

Here a combination of hydrographic data from full depth transatlantic cruises, argo float data and information from the 26°N Mooring array is used to quantify a 5.5-year time series of the freshwater flux at 26°N every ten days. The flux shows no significant trend with time although there is significant seasonal variability. The equivalent freshwater flux - or the freshwater divergence (including air-sea fluxes and storage) between 26°N and Bering Strait - has a mean value of $-0.32 \text{ Sv} \pm$ standard deviation of 0.22 Sv . This equivalent freshwater flux is decomposed into its horizontal gyre component ($0.29 \text{ Sv} \pm 0.04 \text{ Sv}$), its vertical overturning component (mean = $-0.67 \text{ Sv} \pm 0.23 \text{ Sv}$) and the throughflow component ($0.06 \text{ Sv} \pm 0.00 \text{ Sv}$). The strength, sign and variability of the freshwater flux is dominated by the overturning component.