Supplementary material

Figure S1. From top to bottom: Float location (a, b). Potential temperature ($T$ in °C) (c, d). Salinity (S) (e,f). Potential density anomaly ($\sigma_\theta = \rho_\theta - 1000$ kg m$^{-3}$) (g, h). Buoyancy frequency ($N$ in cycles per hour) (i, j). Turner angle ($T_T$ in rotation degrees) (k, l). And bathymetry sections (meters) (m, n) for the data time series of the SOCCOM *68, and *97, for the MRR and NMR, respectively. The data cover from January 2015 – January 2019 and profiles depth from 0 to 1000 m. (Dashed line) Marks the period of the 2017 Polynya event.
Figure S2. From top to bottom: Diapycnal diffusivity ($k_\rho$), thermobaric coefficients, heat flux ($F_H$ in W m$^{-2}$), and density ratio ($R_\rho$ in m), of the SOCCOM *68 (a, c, e, g), and *97 (b, d, f, h), representative for the NMR and MRR, respectively. The data span January 2015 – January 2019 and the profile depths are shown from 0 to 300 m. (Dashed line) Marks the period of the 2017 Polynya event.