

Supplementary Information

Cyprus Eddy tracking center

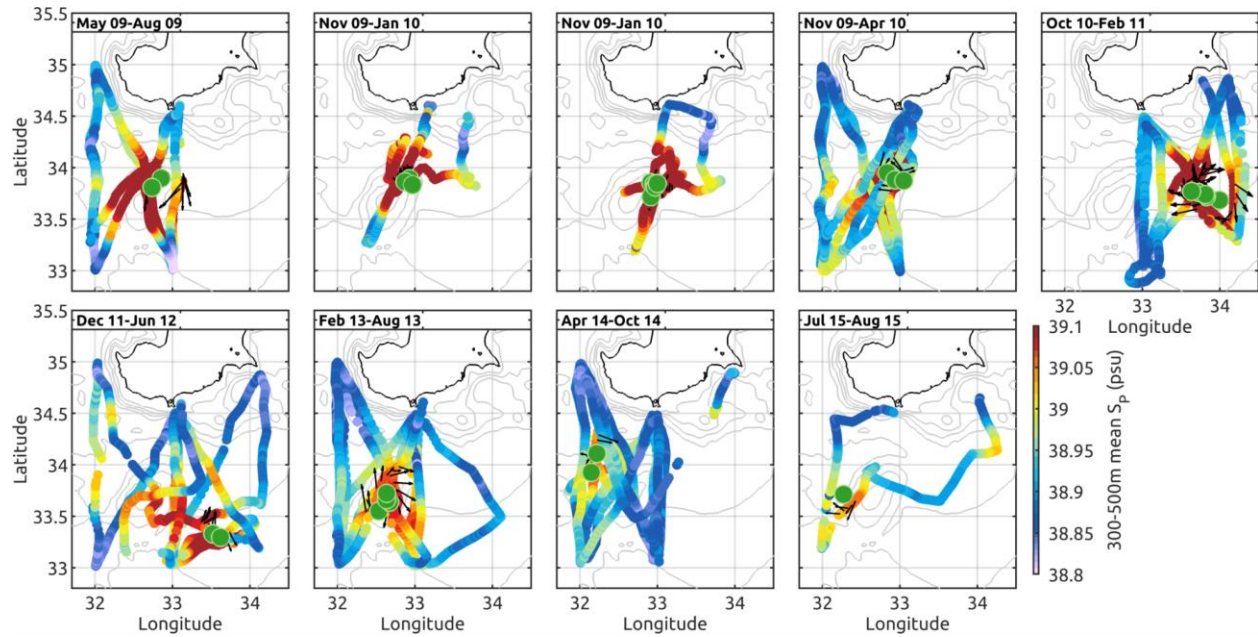


Figure S1: Map of glider deployments during the 2009-2015 period showing the detected CE center (green dots). The scatter plots show the mean salinity between 300 and 500 m as a proxy of the presence of the deep core of the CE. The black arrows are depth-average currents used to detect the CE centers.

Rossby waves dispersion relation

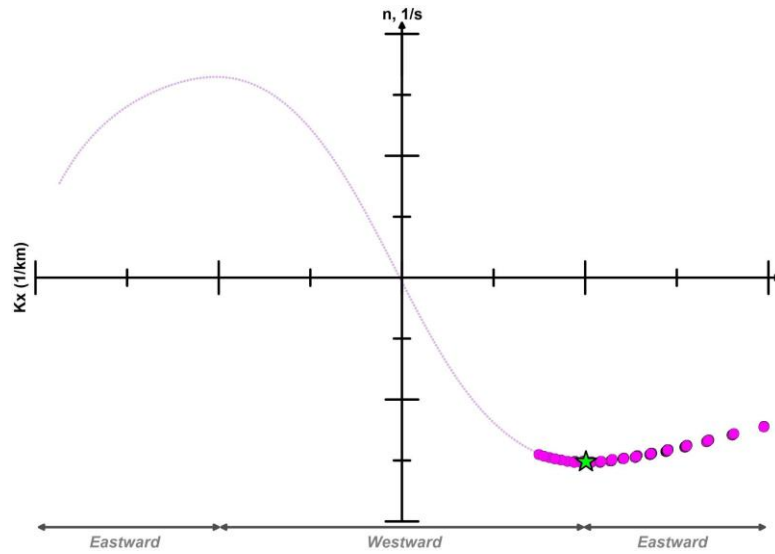


Figure S2: Dispersion relation of Rossby waves computed with data from TOEddies algorithm and for a constant meridional wavenumber K_y following Cushman 2009 (large magenta dots). Tiny magenta dots show the missing part of the theoretical curve. The green star indicates the reversal point from the eastward to westward energy propagation curve

Theoretical and observed wavelengths

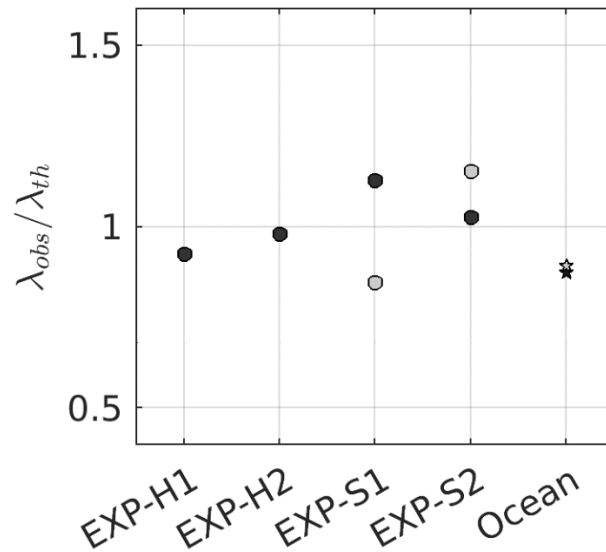


Figure S3: (a) Ratio of the experimental (circles) and ocean (stars) wavelengths normalized with the theoretical wavelengths. Black and gray symbols refer to values computed with wavelengths from the theoretical models (λ_{th} and λ_{MC} respectively). Note that for the ocean case we used $\lambda_{obs} = 204$ km computed from January to May 2015.

Water transport

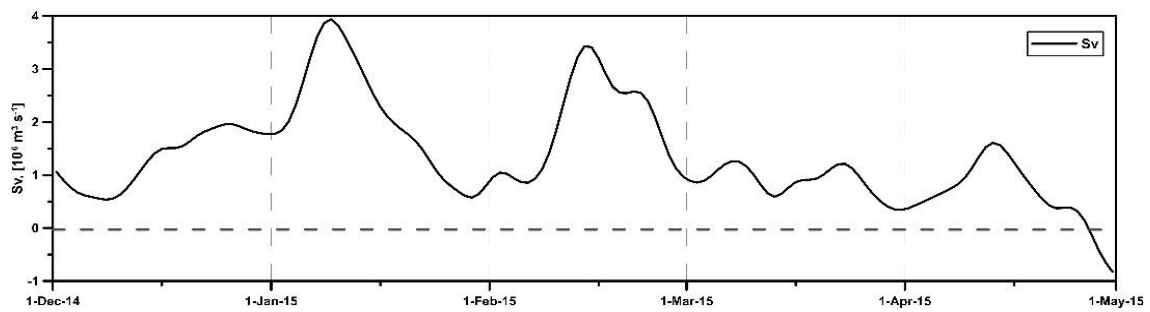


Figure S4: northward water transport in the upper 150 m along the zonal transect 34.1° N , $35\text{--}36^\circ \text{ E}$