



Argo's adventures in waveland: characteristics of the internal gravity wave spectrum obtained from finestructure profiles

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Oceanic small-scale turbulent mixing contributes to driving the large-scale overturning circulation and hence plays an important role for Earth's climate, but remains unresolved in global ocean models. The breaking of internal gravity wave is a major source of small-scale turbulence, so that consistent mixing parameterizations take internal wave energetics into account. These parameterizations rely on a realistic description of the ocean's wave field and therefore on large-scale observational campaigns.

The global Argo program maintains almost 4000 freely drifting floats, which have collected temperature, salinity and pressure information in the ocean's upper 2000 m for the past 19 years. This data base provides valuable information on the global internal gravity wave field and on the spatial and temporal variability of internal wave-induced turbulent mixing. We here present how it can be exploited to estimate parameters of the internal wave spectrum such as the spectral slope or the bandwidth.