



On the efficiency of mixing above a deep sloping topography

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Using high spatial and time resolution of moored temperature sensors, mixing efficiency is studied above a deep-sea slope of Rockall Bank, a region dominated by topographically-trapped diurnal tides. On average, $\Gamma = 0.21 \pm 0.01$ is a reliable estimate for the flux coefficient, a measure for the mixing efficiency. However, it is found much higher in some circumstances, reaching for example $\Gamma = 0.36 \pm 0.01$ on average during the upslope phase of the diurnal tidal cycle. This period is dominated by convective instabilities resulting from the upslope propagation of bore-like frontal structures.