



Fig. 19. Altimetric analysis of sea-surface topography, with inferred currents shown as arrows, for October 30, 1994. The location of the moored array is marked by the red square.

net oceanic heating conditions, so L is negative under destabilizing surface forcing conditions. The non-dimensional parameter L/h , where h is the depth of the mixed layer base (with the z -direction positive upwards), then emerges as an important parameter (Niiler and Kraus, 1977). When this ratio is small and positive, convection is dominant, while if the ratio is large, wind stirring dominates the generation of turbulence, and hence the entrainment at the base of the mixed layer. When

the ratio is negative, the boundary layer is stable and convection not active. Monin–Obukhov scaling assumes constant fluxes throughout the surface layer and does not address possible shear generation of turbulent energy at the mixed layer base, and is therefore not always directly applicable to the oceanic mixed layer. However, this assumption of constant flux through the layer is valid at night when solar heating is non-existent. At night during the NE Monsoon, this parameter is indeed small