

INTERLEAVING IN THE CAPE VERDE FRONTAL ZONE

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Abstract: During November 2017 was carried out a multidisciplinary survey FLUXES II (FLUXES project) in the Cape Verde Frontal Zone (CVFZ). Temperature-Salinity and microstructure data from observations in high spatial resolution (SeaSoar and gliders) along several sections provide an excellent opportunity to study intrusions and interleaved features across the front. Interleaving motions are thought to be driven by buoyancy forces arising from differential mixing of heat and salt by double diffusion. With the assumption of a steady-state stage of interleaving, the slope of intrusions relative to isopycnal surfaces was studied, finding cases where salt-finger density fluxes exceed those of diffusive convection and vice versa. Also, we explore the effect of vertical shear on the double diffusion processes.

Key words: Cape Verde Frontal Zone, thermohaline fronts, interleaving process, double diffusion, vertical shear, FLUXES project

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