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On the West Atlantic Ocean Equatorial boundary layer

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The equatorial Ocean shows a different dynamics compared to off-equatorial regions and it can be therefore interpreted as a boundary layer. It presents a current system that is strongly coherent in zonal direction and time, constituted by stacked alternating zonal currents known as Equatorial Deep Jets. Internal wave activity in the equatorial belt is high, and presents sudden transitions in polarization and mixing properties (van Haren, 2005). Surprisingly, the causes and feeding mechanisms of these equatorial features are still poorly understood.
In this work, data collected in a CTD/LADCP transect between $0°$and $2°N$ in the deep West Equatorial Atlantic Ocean, off the Brazilian coast, are used for a study on *non traditional* equatorial geostrophy, where full Coriolis force is taken into account (Gerkema *et al.*, 2008). For the same area, measurements from a series of one year moored ADCPs and current meters are also considered, with special attention to the observed internal wave field . Low latitude dynamics asks for a robust interpretation and *in situ* measurements as the ones presented here can provide us with a partial, but direct view of the processes taking place in this unique region.

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