

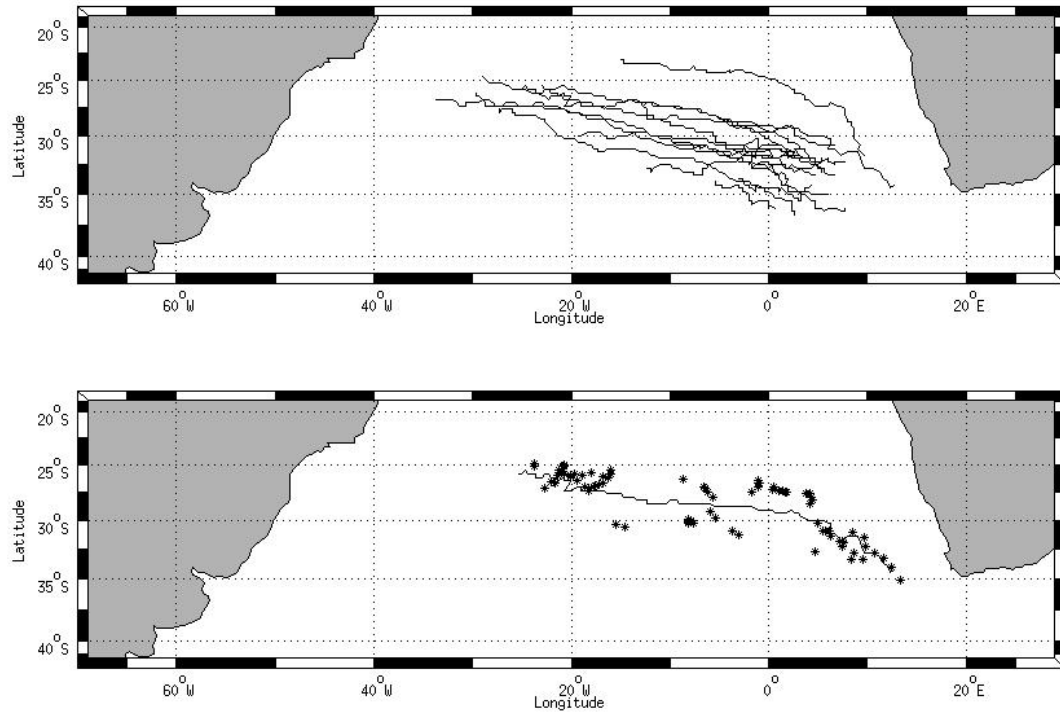


*Supplement of*

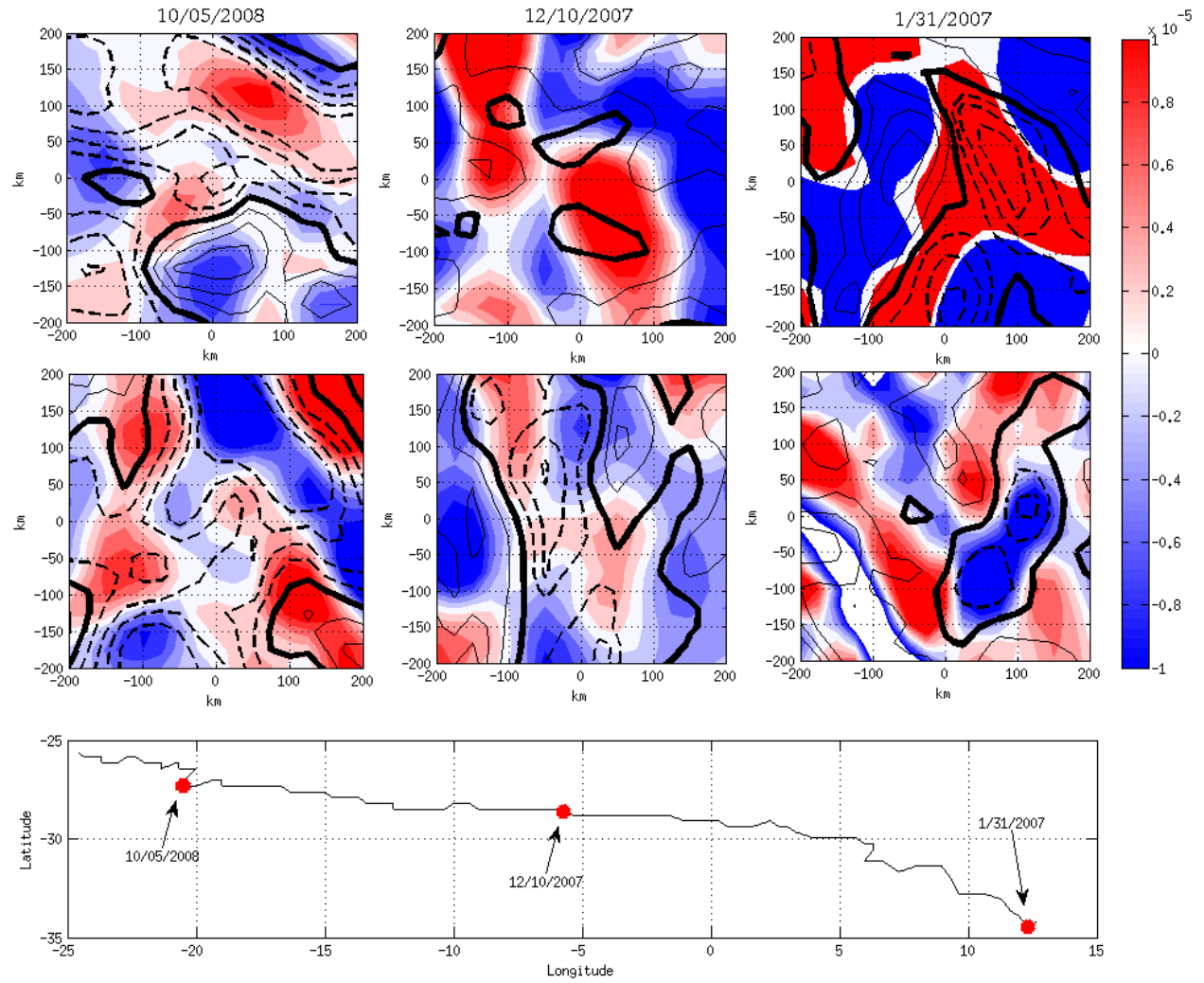
## **The surface thermal signature and air–sea coupling over the Agulhas rings propagating in the South Atlantic Ocean interior**

**J. M. A. C. Souza et al.**

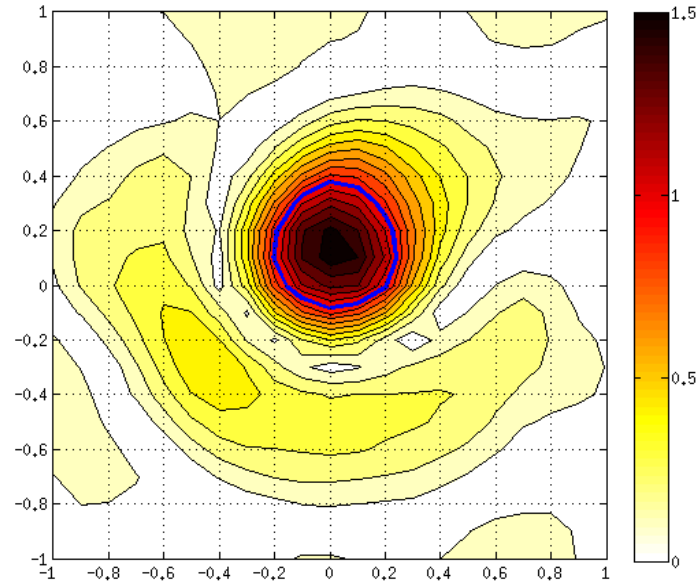
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*Illustration 1.* (upper panel) Tracks of the 16 Agulhas rings used to study the air-sea interactions, and (lower panel) example of the Argo drifters used to build the vertical structure of one of the eddies.



*Illustration 2.* Snapshots of (upper row)  $(\nabla \times \mathbf{u})'$  (color contours) and  $(\partial T / \partial c)'$  (black contours – c. i.  $5 \times 10^{-6}^\circ \text{C per } 100 \text{ km}$ ), and (middle row)  $(\nabla \cdot \mathbf{u})'$  (color contours) and  $(\partial T / \partial d)'$  (black contours – c. i.  $5 \times 10^{-6}^\circ \text{C per } 100 \text{ km}$ ). The thick black lines represent the  $0^\circ \text{C per } 100 \text{ km}$  contours, the continuous lines positive values and the dashed lines negative values of  $T'$  gradient. The lower panel presents the eddy track with the position of the snapshots in red.



*Illustration 3.* Relation between the eddy averaged mean and standard deviation (std) of  $T'$  (c.i. 0.1). The 1 contour, that marks the equality between the mean and the std is highlighted in blue. It is possible to observe that the mean is larger than the std in the eddy core. The representativeness of the mean follows the general spatial pattern observed for the  $T'$  structure.