



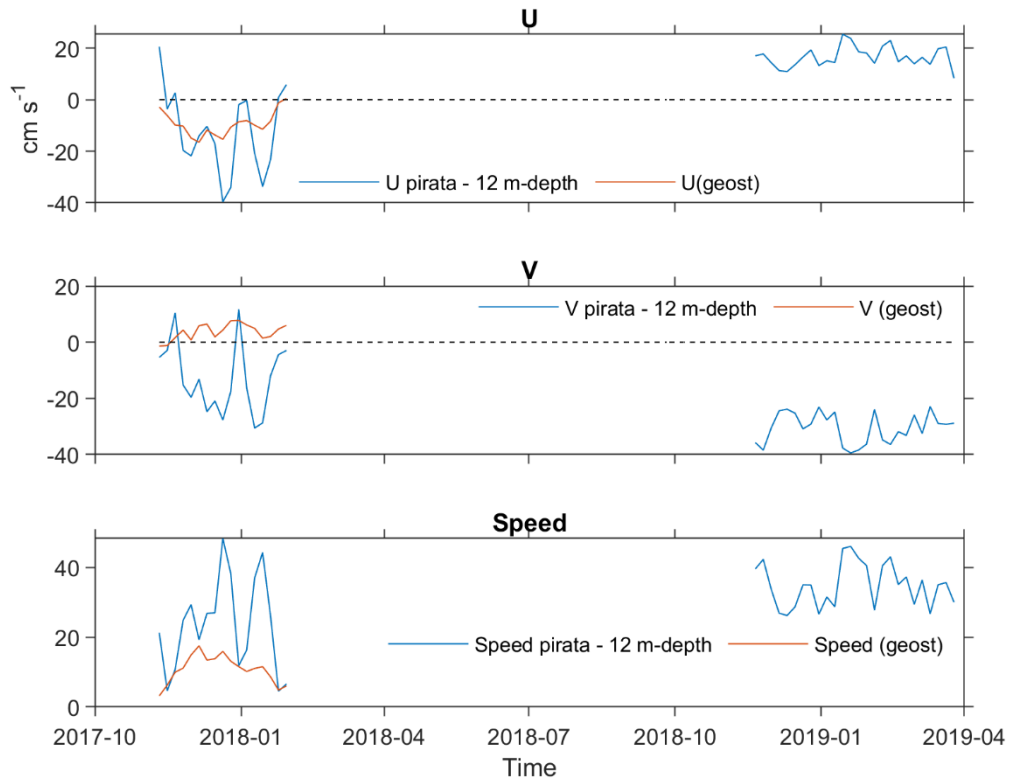
*Supplement of*

**Revisiting the tropical Atlantic western boundary circulation from a 25-year time series of satellite altimetry data**

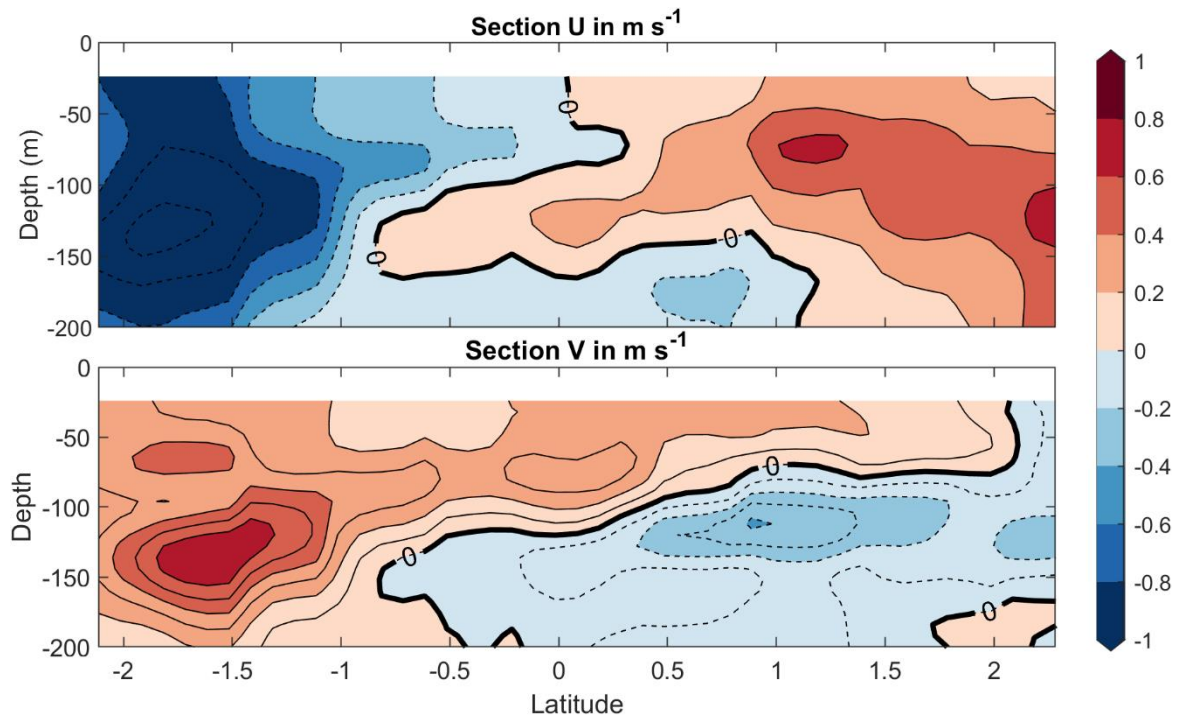
**Djoirka Minto Dimoune et al.**

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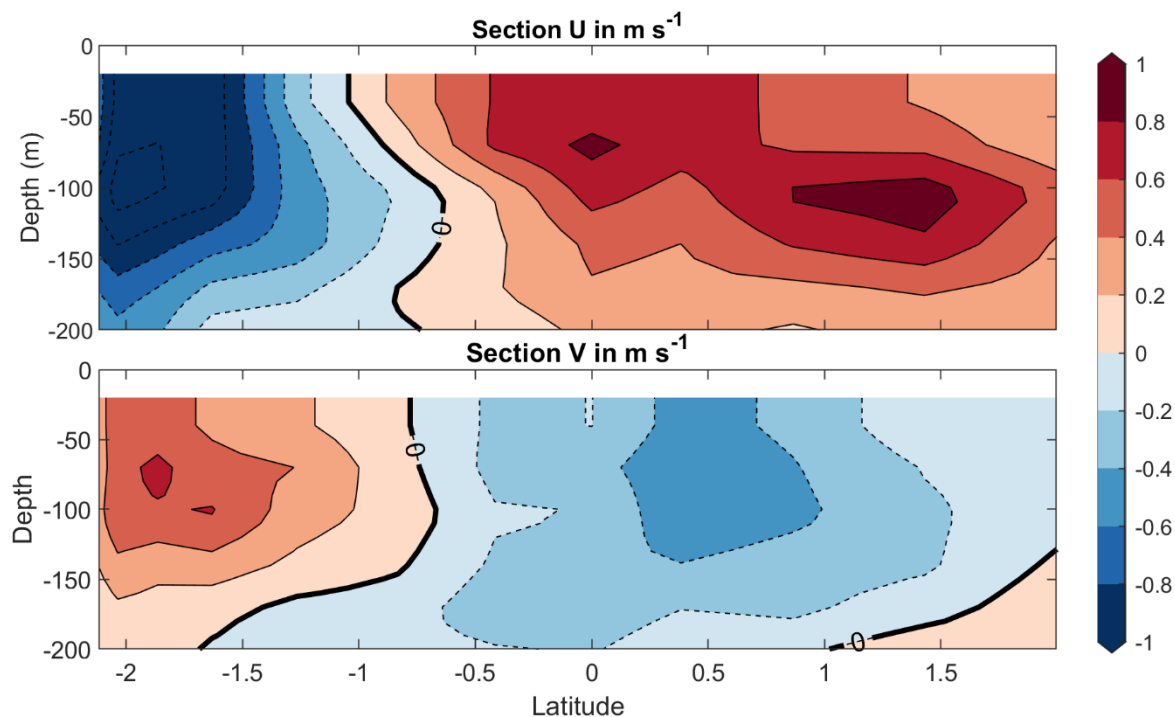
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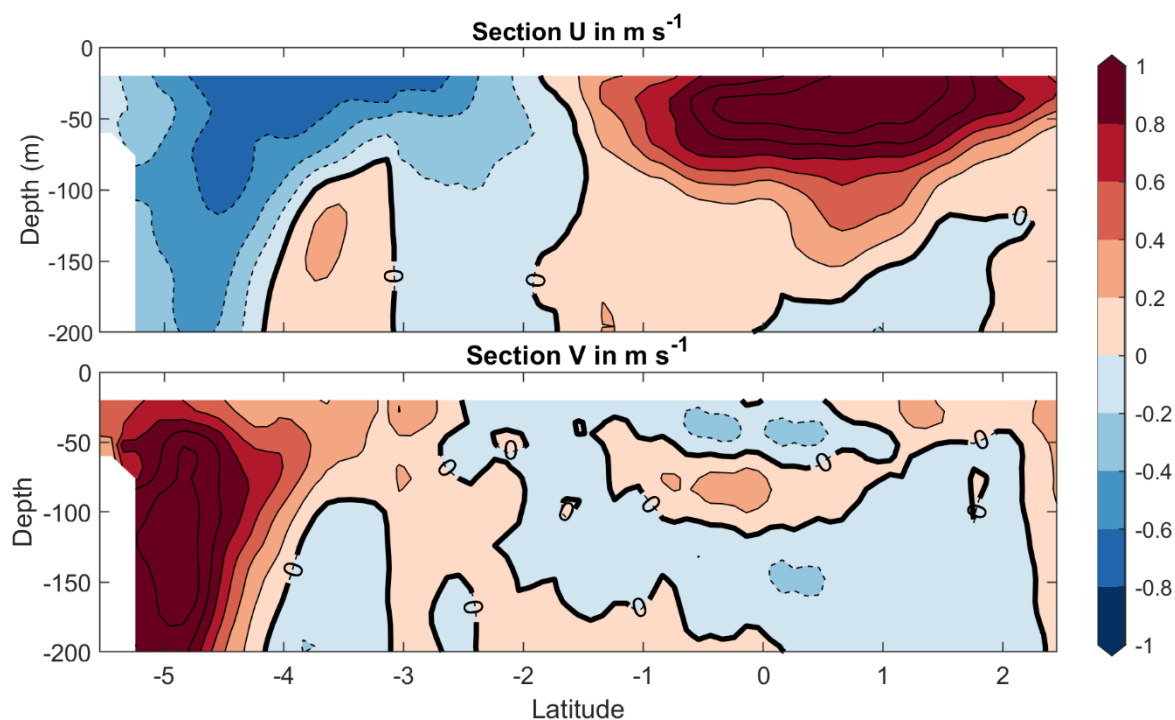
**Figure S1:** Time series of the velocities (in  $\text{cm s}^{-1}$ ) from the PIRATA current meter mooring at  $0^\circ\text{N}35^\circ\text{W}$  (12-m depth) and from the collocated altimetry-derived geostrophic currents over the 11/10/2017-25/03/2019 period. The top and middle panels represent the zonal and the meridional components of the currents, respectively, and the bottom panel represents the current speed. Note that the geostrophic currents were only available for the 11/10/2017-29/01/2018 period.



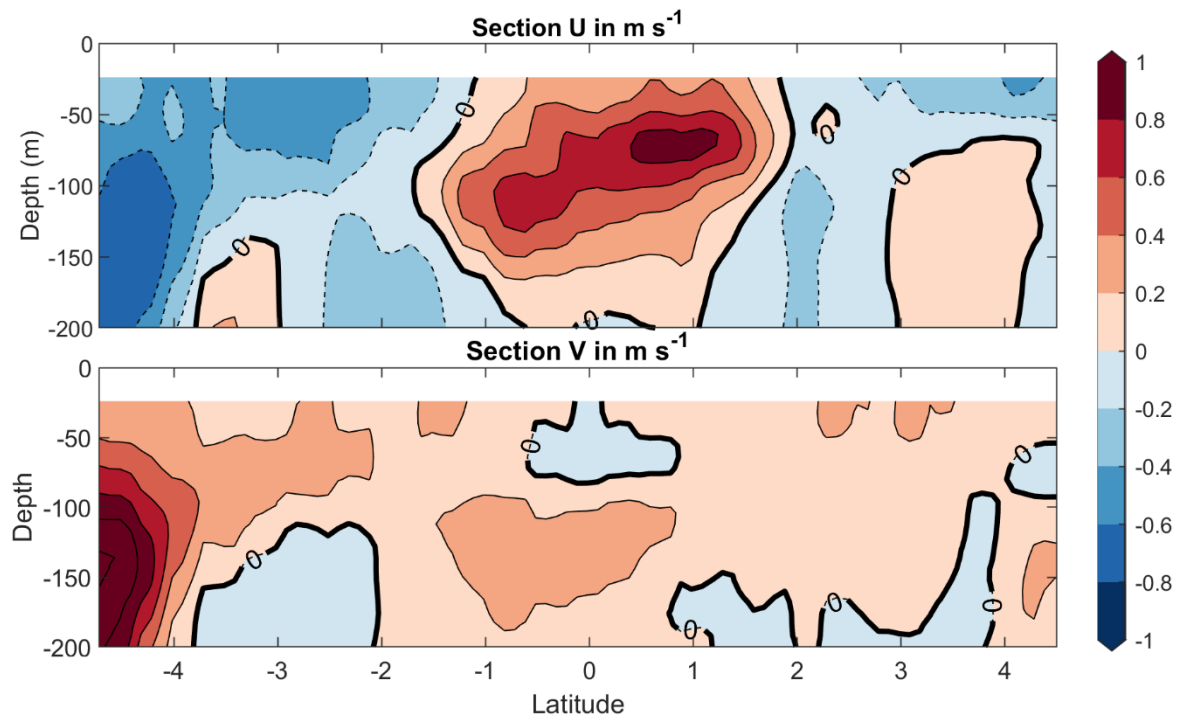
**Figure S2:** Shipboard ADCP section at  $40^\circ\text{W}$  between  $2^\circ\text{S}$ - $2^\circ\text{N}$  during the 07/03/1994 to 10/03/1994 period. The dashed/solid contours represent the westward (northward)/eastward (southward) zonal (meridional) components of the current. The contour intervals are each  $0.2 \text{ m s}^{-1}$  ( $0.1 \text{ m s}^{-1}$ ) for the zonal (meridional) components.



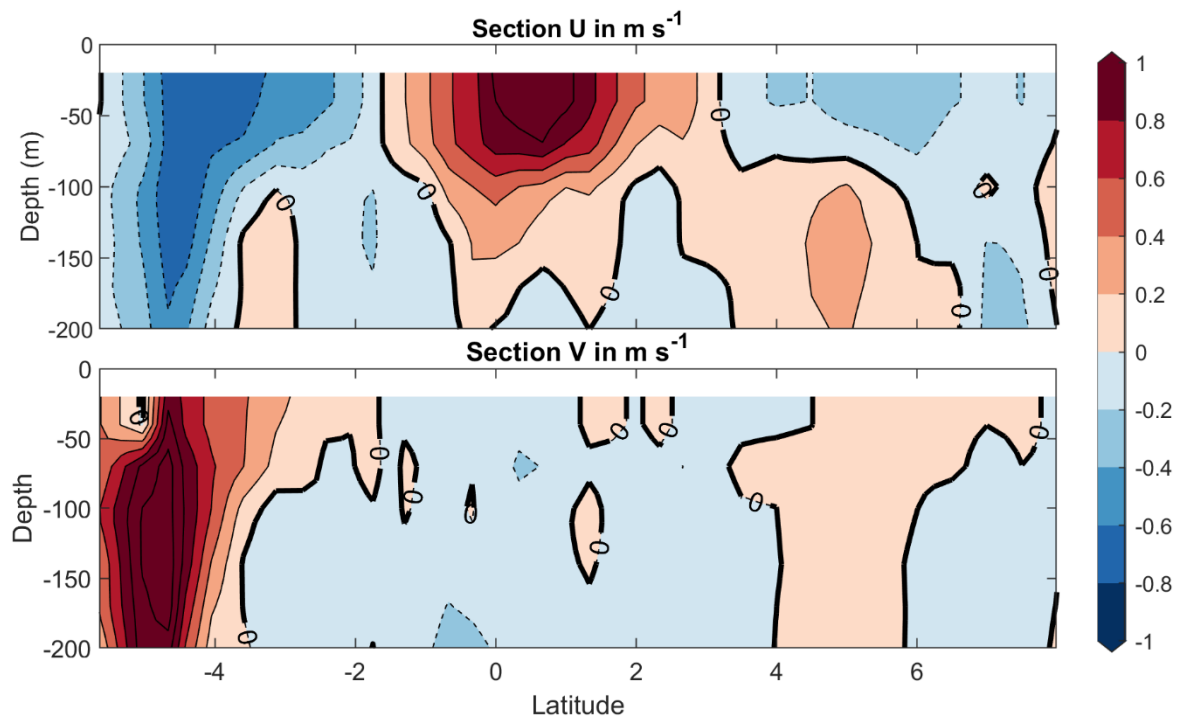
**Figure S3:** Shipboard ADCP section at 40°W between 2°S-2°N during the 03/05/2003 to 05/05/2003 period. The dashed/solid contours represent the westward (northward)/eastward (southward) zonal (meridional) components of the current. The contour intervals are each 0.2 m s<sup>-1</sup> for both components.



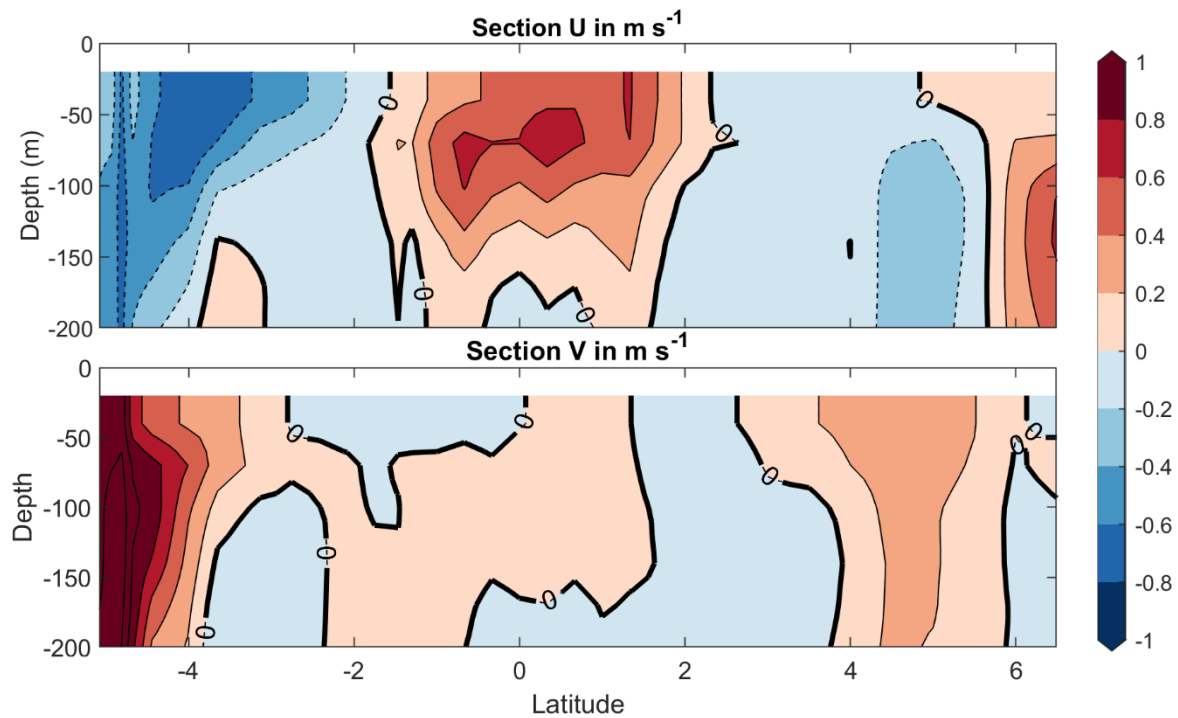
**Figure S4:** Shipboard ADCP section at 35°W between 6°S-3°N during the 30/05/1991 to 05/06/1991 period. The dashed/solid contours represent the westward (northward)/eastward (southward) zonal (meridional) components of the current. The contour intervals are each 0.2 m s<sup>-1</sup> for both components.



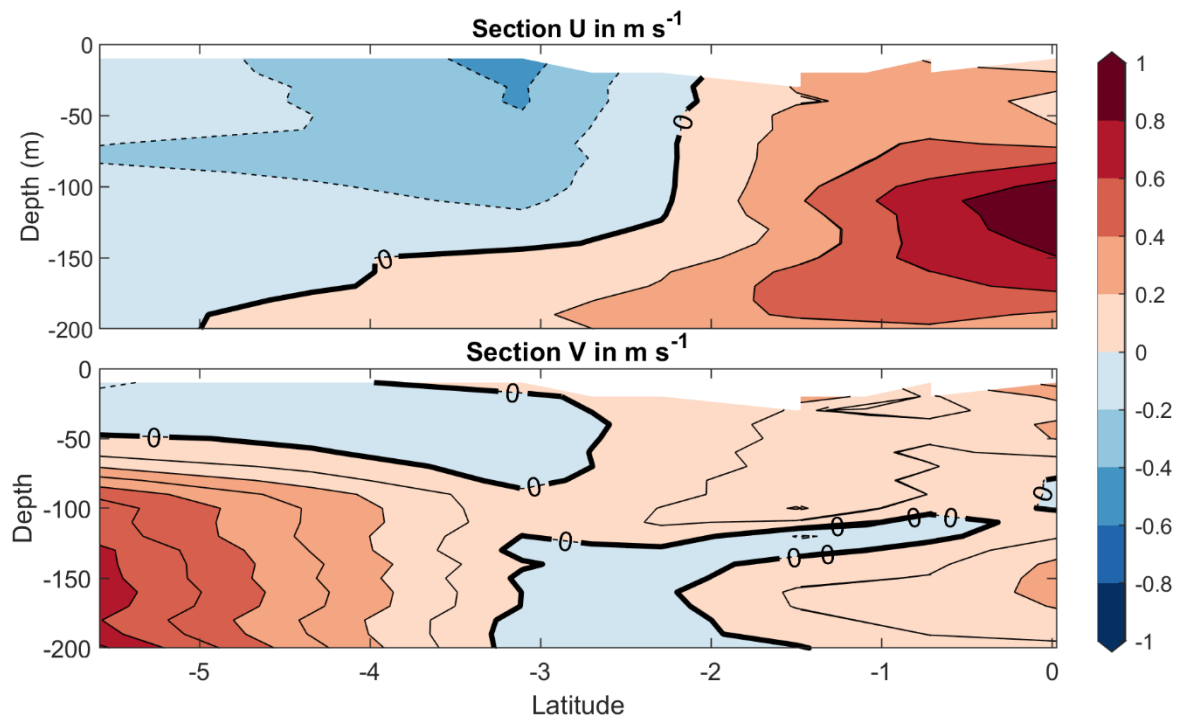
**Figure S5:** Shipboard ADCP section at 35°W between 5°S-5°N during the 13/03/1994 to 18/03/1994 period. The dashed/solid contours represent the westward (northward)/eastward (southward) zonal (meridional) components of the current. The contour intervals are each 0.2 m s<sup>-1</sup> for both components.



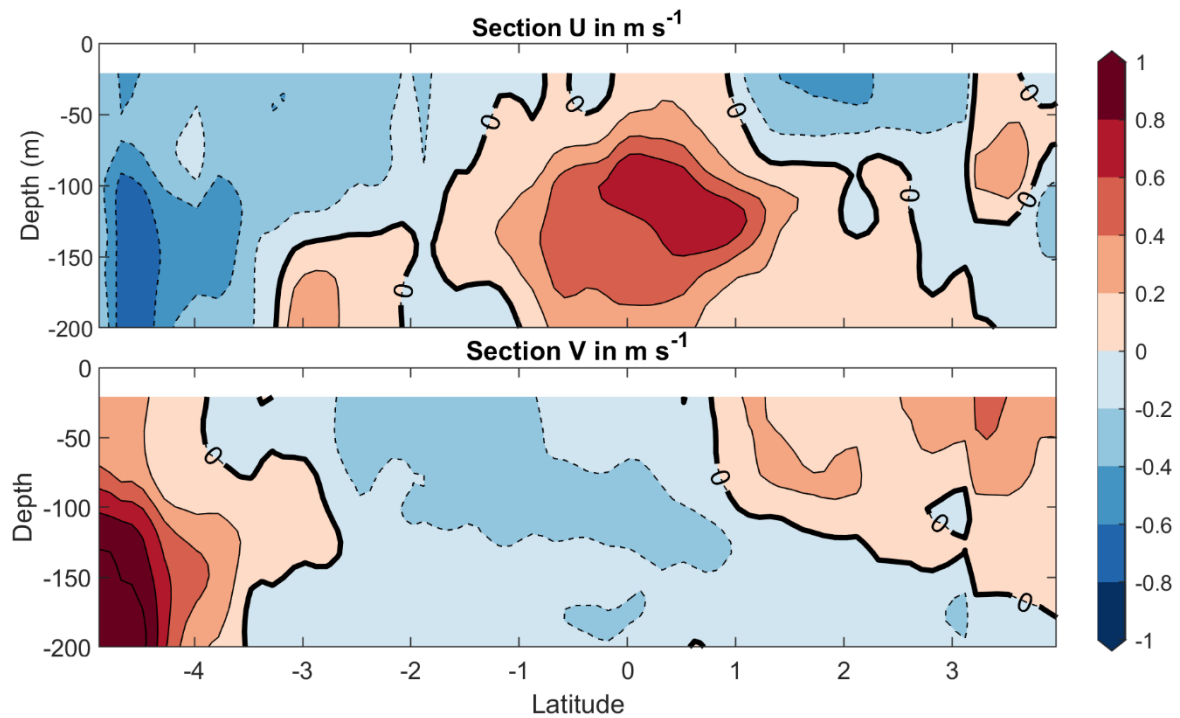
**Figure S6:** Shipboard ADCP section at 35°W between 6°S-8°N during the 09/05/2002 to 16/05/2002 period. The dashed/solid contours represent the westward (northward)/eastward (southward) zonal (meridional) components of the current. The contour intervals are each 0.2 m s<sup>-1</sup> for both components.



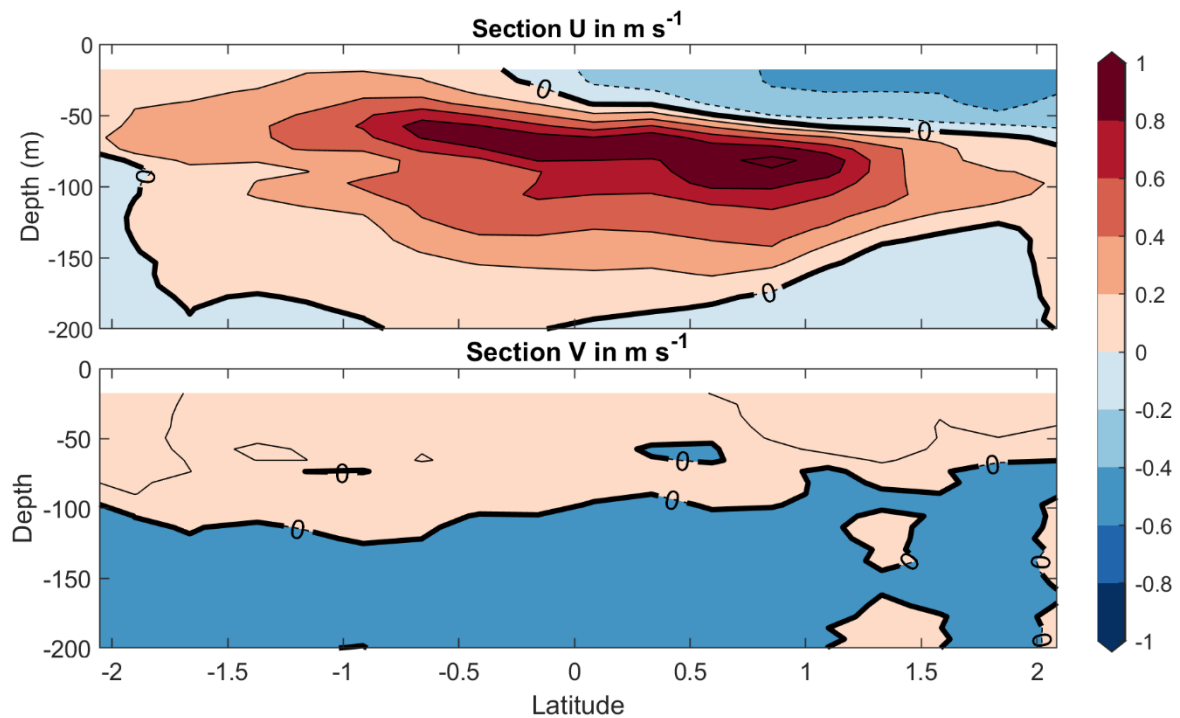
**Figure S7:** Shipboard ADCP section at 35°W between 5°S-3°N during the 26/05/2003 to 01/06/2003 period. The dashed/solid contours represent the westward (northward)/eastward (southward) zonal (meridional) components of the current. The contour intervals are each 0.2 m s<sup>-1</sup> for both components.



**Figure S8:** Shipboard ADCP section at 35°W between 6°S-0°N during the 17/10/1990 to 22/10/1990 period. The dashed/solid contours represent the westward (northward)/eastward (southward) zonal (meridional) components of the current. The contour intervals are each 0.2 m s<sup>-1</sup> (0.1 m s<sup>-1</sup>) for the zonal (meridional) component.



**Figure S9:** Shipboard ADCP section at 35°W between 5°S-4°N during the 02/11/1992 to 07/11/1992 period. The dashed/solid contours represent the westward (northward)/eastward (southward) zonal (meridional) components of the current. The contour intervals are each 0.2 m s<sup>-1</sup> for both components.



**Figure S10:** Shipboard ADCP section at 32°W between 2°S-2°N during the 12/06/2006 to 13/06/2006 period. The dashed/solid contours represent the westward (northward)/eastward (southward) zonal (meridional) components of the current. The contour intervals are each 0.2 m s<sup>-1</sup> for both components.