Tellus
SINCE 1948

Correction: Dynamics of Upwelling and Downwelling in a Channel Basin of the Baltic Sea

CORRECTION

MATTEO MASINI
INGA MONIKA KOSZALKA
JOHAN NILSSON
ALEXANDER SOKOLOV
BO GUSTAFSSON

*Author affiliations can be found in the back matter of this article

STOCKHOLM UNIVERSITY PRESS

ABSTRACT

This article details five corrections to Masini, M., Koszalka, I.M., Nilsson, J., Sokolov, A. and Gustafsson, B. (2025) 'Dynamics of Upwelling and Downwelling in a Channel Basin of the Baltic Sea', *Tellus A: Dynamic Meteorology and Oceanography,* 77(1): 38–66. DOI: https://doi.org/10.16993/tellusa.4070.

This article has been corrected here: https://doi.org/10.16993/tellusa.4070

CORRESPONDING AUTHOR:
Matteo Masini
Department of Meteorology, Stockholm University, Stockholm, Sweden; Bolin Centre for Climate Research, Stockholm, Sweden
matteo.masini@misu.su.se

KEYWORDS:
upwelling; baroclinic instability; the Baltic Sea

TO CITE THIS ARTICLE:
Masini, M., Koszalka, I. M., Nilsson, J., Sokolov, A., & Gustafsson, B. (2026). Correction: Dynamics of Upwelling and Downwelling in a Channel Basin of the Baltic Sea. *Tellus, 78*(1), 68–72. https://doi.org/10.16993/tellus.4248

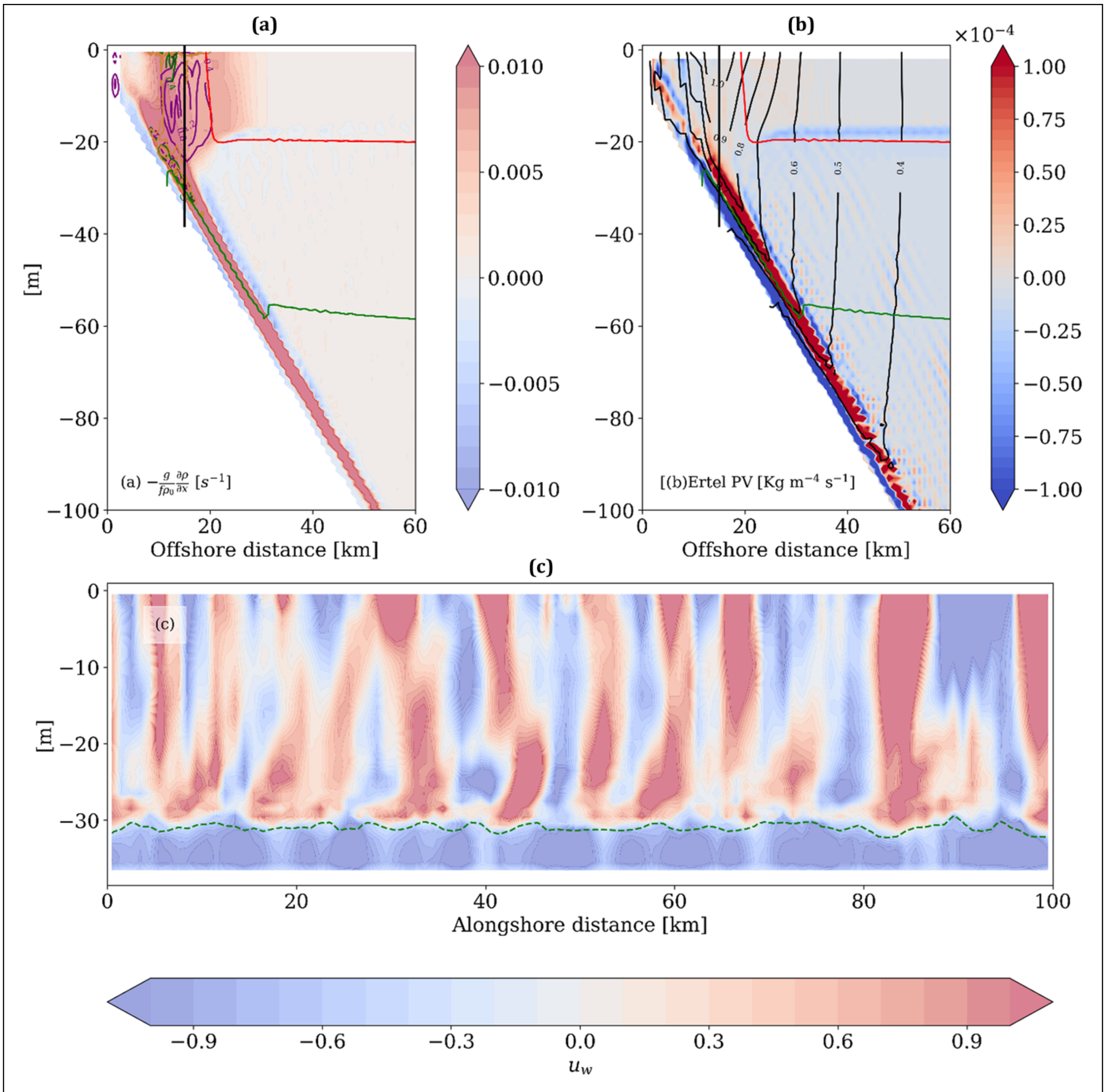
CORRECTIONS

The article 'Dynamics of Upwelling and Downwelling in a Channel Basin of the Baltic Sea' (Masini, *et al.*, 2025) was published with an error in Figure 7 (p. 52) and Figure 8 (p. 53). The following changes have been made:

1. The order of the two figures has been switched;
2. The field in panel b) of both figures has been corrected by multiplying by a constant value;
3. The units reported in panel b) labels have been corrected.
4. In the caption of the new Figure 7 item 'b)' has been updated.
5. Figure 4 has also been corrected and text added to the caption.

The errors are only in the figures, and they do not alter the results.

The new versions of Figures 7 and 8 are shown below.



Corrected Caption Figure 7

Instability diagnostics after the onset of instability ($t_i = 6$) for UPSLOPE, summer. **(a):** Thermal wind overlapped with contours of cpe (purple lines) and cmke (green lines). Contour lines show the interval (0.4, 1.6) · 10^{-8}, with every interval given by 0.4 · 10^{-8}. Thermocline and halocline are given by the dashed red and green lines, respectively. The vertical solid black line marks the frontal jet location alongshore section in (c) is taken. **(b)** PV field superimposed on the contours of alongshore velocity (coastal jet; black lines). **(c)** Alongshore section of normalized cross-shore velocity u_w at the frontal jet location (black solid line in (a)).

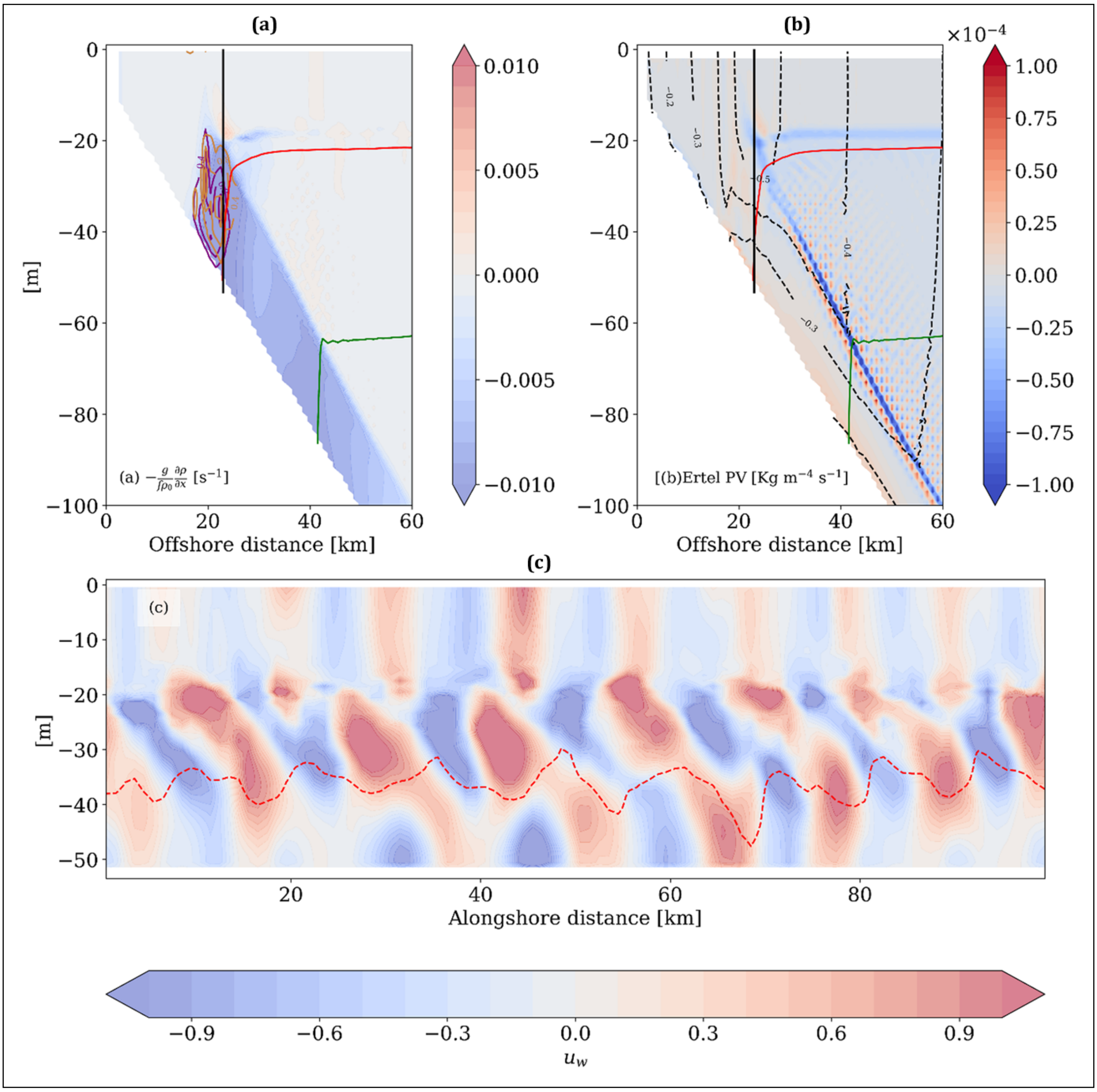


Figure 8
Same as Figure 7 but for DOWNSLOPE, summer, $t_i = 18$.

In the caption of Figure 7 the following change has been made:

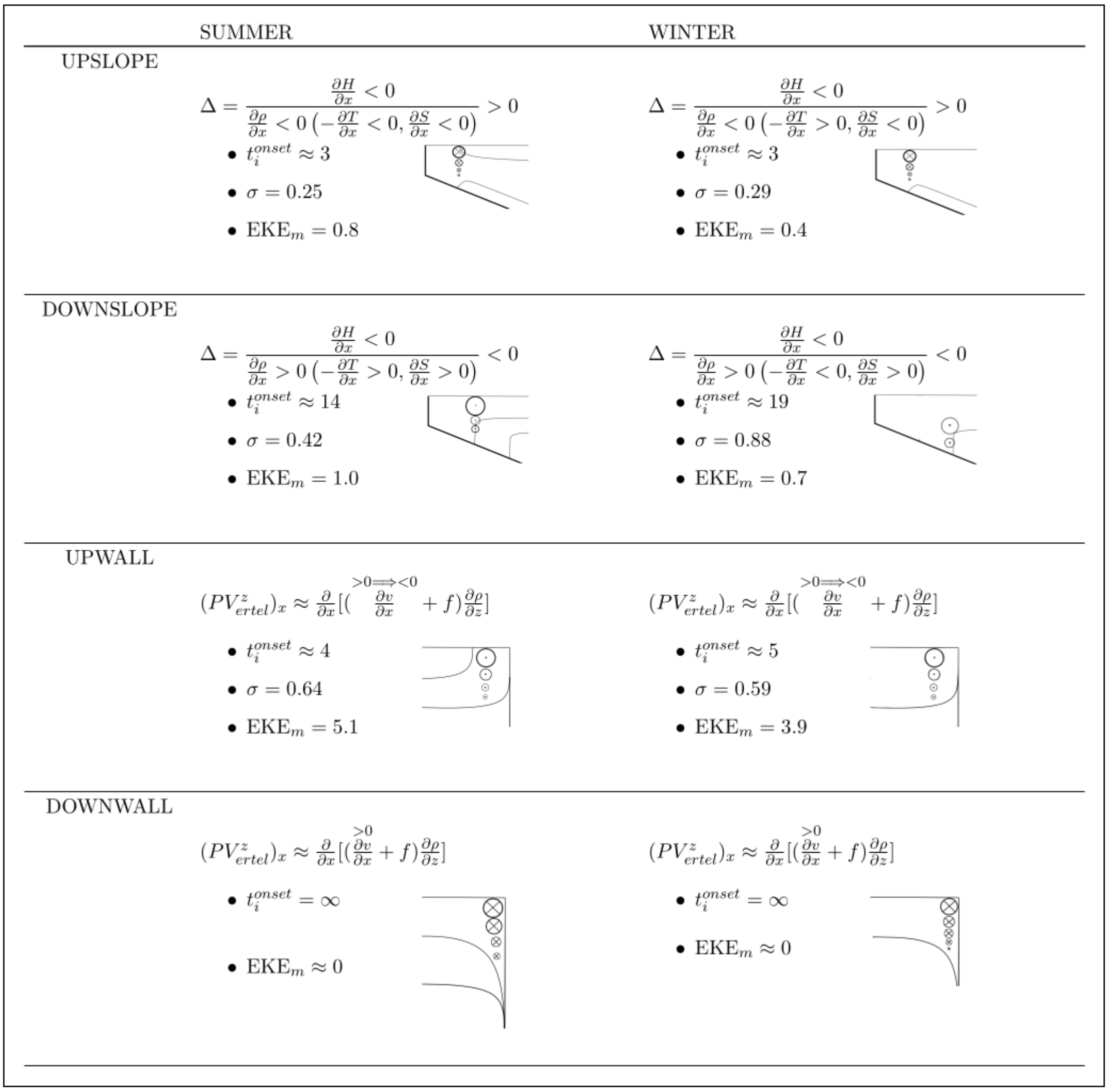
> (b) PV field contours of alongshore velocity (coastal jet; black lines).

is now

> (b) PV field superimposed on the contours of alongshore velocity (coastal jet; black lines)

Figure 4 has the following edits:

- PV_{ertel} needs to be substituted with the $(PV^z_{ertel})_x$ because we are showing and discussing only the x-gradient (cross-shore) of the vertical Ertel PV in the image.
- $\partial v/\partial z$ needs to be substituted with the $\partial v/\partial x$ which is the correct term in the vertical vorticity $\xi_z = \partial v/\partial x - \partial u/\partial y \approx \partial v/\partial x$ to be considered for computing the vertical Ertel PV.
- the following sentence is added at the end of the caption in Figure 4: "*Signs in the brackets in the bottom two rows (PV gradient condition) refer to the sign of the cross-shore PV gradient.*"



Corrected Caption Figure 4

A schematic summary of the instability diagnostics for the different model configurations. EKE is given in 10^{-6} m^2 s^{-2}. Growth rate in day^{-1}. See text for details. Signs in the brackets in the bottom two rows (PV gradient condition) refer to the sign of the cross-shore PV gradient.

A correction has also been made to the affiliation of author Masini, M. where the country 'Italy' has been corrected to 'Sweden'.

COMPETING INTERESTS

The authors have no competing interests to declare.

AUTHOR AFFILIATIONS

Matteo Masini orcid.org/0009-0008-0977-2177
Department of Meteorology, Stockholm University, Stockholm, Sweden; Bolin Centre for Climate Research, Stockholm, Sweden

Inga Monika Koszalka orcid.org/0000-0002-9164-2054
Department of Meteorology, Stockholm University, Stockholm, Sweden; Bolin Centre for Climate Research, Stockholm, Sweden; Stockholm University Baltic Sea Centre, Stockholm, Sweden

Johan Nilsson orcid.org/0000-0002-9591-124X
Department of Meteorology, Stockholm University, Stockholm, Sweden; Bolin Centre for Climate Research, Stockholm, Sweden

Alexander Sokolov
Stockholm University Baltic Sea Centre, Stockholm, Sweden

Bo Gustafsson orcid.org/0000-0003-1048-8452
Stockholm University Baltic Sea Centre, Stockholm, Sweden

REFERENCE

Masini, M., Koszalka, I. M., Nilsson, J., Sokolov, A., & **Gustafsson, B.** (2025). Dynamics of Upwelling and Downwelling in a Channel Basin of the Baltic Sea. *Tellus A: Dynamic Meteorology and Oceanography*, *77*(1), 38–66. https://doi.org/10.16993/tellusa.4070

TO CITE THIS ARTICLE:
Masini, M., Koszalka, I. M., Nilsson, J., Sokolov, A., & Gustafsson, B. (2026). Correction: Dynamics of Upwelling and Downwelling in a Channel Basin of the Baltic Sea. *Tellus*, *78*(1), 68–72. https://doi.org/10.16993/tellus.4248

Submitted: 05 May 2026 **Accepted:** 05 May 2026 **Published:** 18 May 2026