

## List of publications

### Refereed papers:

Dey, D., Geen, R., Lambert, F.H., Agrawal, S., Vallis, G., Marsh, R., Skliris, N. and Döös, K. (2023), Identification of the atmospheric water sources and pathways responsible for the East Asian summer monsoon rainfall. *Q J R Meteorol Soc.* <https://doi.org/10.1002/qj.4621>

Abdennadher, J, Boukthir, M and Döös, K. 2023. Water Mass Transformation in a Secluded Bay of the Mediterranean Sea. *Tellus A: Dynamic Meteorology and Oceanography*, 75(1): 375–391. <https://doi.org/10.16993/tellusa.3243>

Berglund, S., Döös, K., Groeskamp, S., and McDougall, T. (2023). North Atlantic Ocean circulation and related exchange of heat and salt between water masses. *Geophysical Research Letters*, 50, e2022GL100989. <https://doi.org/10.1029/2022GL100989>

Döös, K., Lundberg, P. and Aldama Campino, A., 2022. *Basic Numerical Methods in Meteorology and Oceanography*. Stockholm: Stockholm University Press. DOI: <https://doi.org/10.16993/bbs>

Berglund, S., Döös, K., Groeskamp, S., McDougall, T., 2022 The downward spiralling nature of the North Atlantic Subtropical Gyre. *Nat Commun* 13, 2000 (2022). <https://doi.org/10.1038/s41467-022-29607-8>

Dey, D., and Döös, K., 2021: Tracing the origin of the South Asian summer monsoon precipitation and its variability using a novel Lagrangian framework, *Journal of Climate*, <https://doi.org/10.1175/JCLI-D-20-0967.1>

Berglund, S., Döös, K., Campino, A. A., and Nycander, J. (2021). The water mass transformation in the upper limb of the overturning circulation in the Southern Hemisphere. *Journal of Geophysical Research: Oceans*, 126, e2021JC017330. <https://doi.org/10.1029/2021JC017330>

Aldama-Campino, A., Fransner, F., Ödalen, M., Groeskamp, S., Yool, A., Döös, K., and Nycander, J. (2020). Meridional Ocean Carbon Transport. *Global Biogeochemical Cycles*, 34, e2019GB006336, <https://doi.org/10.1029/2019GB006336>

Aldama-Campino, A. and K. Döös (2020) Mediterranean overflow water in the North Atlantic and its multidecadal variability, *Tellus A: Dynamic Meteorology and Oceanography*, 72:1, 1-10, DOI: 10.1080/16000870.2018.1565027

Wen, Q., K. Döös, Z. Lu, Z. Han, and H. Yang, 2020: Investigating the Role of the Tibetan Plateau in ENSO Variability. *J. Climate*, 2020, <https://doi.org/10.1175/JCLI-D-19-0422.1>

Dey, D. and Döös, K., 2020. Atmospheric freshwater transport from the Atlantic to the Pacific Ocean: a Lagrangian analysis. *Geophysical Research Letters*, 47, e2019e2019GL086176, <https://doi.org/10.1029/2019GL086176>

Hieronimus, M., J. Nycander, J. Nilsson, K. Döös, and R. Hallberg, 2019: Oceanic Overturning and Heat Transport: The Role of Background Diffusivity. *J. Climate*, 32, 701?716, <https://doi.org/10.1175/JCLI-D-18-0438.1>

Dipanjan Dey and Kristofer Döös (2019) The coupled ocean-atmosphere hydrologic cycle, *Tellus A: Dynamic Meteorology and Oceanography*, 71:1, DOI: 10.1080/16000870.2019.1650413

Hordoir, R., Axell, L., Höglund, A., Dieterich, C., Fransner, F., Gröger, M., Liu, Y., Pemberton, P., Schimanke, S., Andersson, H., Ljungemyr, P., Nygren, P., Falahat, S., Nord, A., Jönsson, A., Lake, I., Döös, K., Hieronymus, M., Dietze, H., Löptien, U., Kuznetsov, I., Westerlund, A., Tuomi, L., and Haapala, J.: Nemo-Nordic 1.0: a NEMO-based ocean model for the Baltic and North seas ? research and operational applications, *Geosci. Model Dev.*, 12, 363-386, <https://doi.org/10.5194/gmd-12-363-2019>, 2019.

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Berglund S., K. Döös, J. Nycander, 2017: Lagrangian tracing of the Water-mass transformations in the Atlantic Ocean. *Tellus*, doi:10.1080/16000870.2017.1306311

Döös, K., J. Kjellsson, J. Zika, F. Laliberté, L. Brodeau and A. Aldama Campino, 2017: The Coupled Ocean-Atmosphere Hydrothermohaline Circulation. *Journal of Climate*, doi: <http://dx.doi.org/10.1175/JCLI-D-15-0759.1>

Döös, K., Jönsson, B., and Kjellsson, J., 2017: Evaluation of oceanic and atmospheric trajectory schemes in the TRACMASS trajectory model v6.0, *Geosci. Model Dev.*, 10, 1733-1749, <https://doi.org/10.5194/gmd-10-1733-2017>

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Soomere, T., K. Döös, A. Lehmann, M. Meier, J. Murawski, K. Myrberg, E. Stanev, 2014: The Potential of Current- and Wind-driven Transport for Environmental Management of the Baltic Sea. *AMBIO* 43, 94-104, <https://doi.org/10.1007/s13280-013-0486-3>

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Jönsson B, K. Döös , P. Lundberg , K. Myrberg, 2011: A Lagrangian-trajectory study of a gradually mixed estuary. *Continental Shelf Research* 31 (2011) 1811-1817, doi:10.1016/j.csr.2011.07.007

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Thompson, B, J. Nilsson, J. Nycander, M Jakobsson, and K Döös, 2010, Ventilation of the Miocene Arctic Ocean: An idealized model study: *Paleoceanography*, v. 25, p. PA4216.

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## **Review articles and book chapters**

Kjellsson, J., K. Döös, T. Soomere, 2013: Preventive Methods for Coastal Pollution: towards the Use of Ocean Dynamics for Pollution Control. Book Chapter 8: Evaluation and Tuning of Model Trajectories and Spreading Rates in the Baltic Sea using Surface-drifter Observations. Springer International Publishing. DOI: 10.1007/978-3-319-00440-2\_8

Döös, K., J. Kjellsson, B., Jönsson, 2013: Preventive Methods for Coastal Pollution: towards the Use of Ocean Dynamics for Pollution Control. Book Chapter 7: TRACMASS - A Lagrangian Trajectory Model. Springer International Publishing. DOI: 10.1007/978-3-319-00440-2\_7

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Webb, D., Thompson, S. and Döös, K. Heat transport in FRAM, In: Pollard, R. and Smythe-Wright, D. eds. *Understanding Ocean Circulation: UK WOCE, The First Six Years*, Swindon, NERC, 1996, p.22.

Döös K., 1989: Etude numérique de la variabilité saisonnière de 1982 à 1984 dans l'océan Atlantique tropical. Thèse de doctorat de l'Université Paris VI.

## **Book:**

Döös, K., Lundberg, P. and Aldama Campino, A., 2022. *Basic Numerical Methods in Meteorology and Oceanography*. Stockholm: Stockholm University Press. DOI: <https://doi.org/10.16993/bbs>

## **Open-access computer programs:**

The Lagrangian trajectory code TRACMASS: <http://tracmass.org/> and is open source available at <https://github.com/does/tracmass> and <http://doi.org/10.5281/zenodo.4337926>