

NOAA/AOML  
Western Boundary Time Series (WBTS)  
Peer Reviewed Publications

Updated October 2023

**2023**

Johns, W.E., S. Elipot, D.A. Smeed, B. Moat, B. King, D.L. Volkov, and R.H. Smith, 2023: Towards two decades of Atlantic Ocean mass and heat transports at 26.5°N. *Phil. Trans. R. Soc. A* **381**: 20220188. <http://doi.org/10.1098/rsta.2022.0188>

Pujiana, K., Volkov, D. L., Dong, S., Goni, G., Baringer, M., Smith, R. H., & Garcia, R. (2023). Genesis of the Gulf Stream Subseasonal Variability in the Florida Straits. *Journal of Geophysical Research: Oceans*, 128(2), e2022JC018555. <https://doi.org/10.1029/2022JC018555>

Volkov, D.L., D.A. Smeed, M. Lankhorst, S. Dong, B.I. Moat, J. Willis, W. Hobbs, T. Bilo, W. Johns, and L. Chomiak, 2023: Meridional overturning circulation and heat transport in the Atlantic Ocean. In Chapter 3, *State of the Climate in 2022*. Bulletin of the American Meteorological Society, 104(9):S181-S184, <https://doi.org/10.1175/BAMS-D-23-0076.2>

Volkov, D. L., Zhang, K., Johns, W. E., Willis, J. K., Hobbs, W., Goes, M., Zhang, H., & Menemenlis, D. (2023). Atlantic meridional overturning circulation increases flood risk along the United States southeast coast. *Nature Communications*, 14(1), 1-10. <https://doi.org/10.1038/s41467-023-40848-z>

**2022**

Berx, B., D. Volkov, J. Baehr, M.O. Baringer, P. Brandt, K. Burmeister, S. Cunningham, M.F. de Jong, L. de Steur, S. Dong, E. Frajka-Williams, G.J. Goni, N.P. Holliday, R. Hummels, R. Ingvaldsen, K. Jochumsen, W. Johns, S. Jónsson, J. Karstensen, D. Kieke, R. Krishfield, M. Lankhorst, K.M.H. Larsen, I. Le Bras, C.M. Lee, F. Li, S. Lozier, A. Macrander, G. McCarthy, C. Mertens, B. Moat, M. Moritz, R. Perez, I. Polyakov, A. Proshutinsky, B. Rabe, M. Rhein, C. Schmid, Ø. Skagseth, D.A. Smeed, M.-L. Timmermans, W.-J. von Appen, B. Williams, R. Woodgate, and I. Yashayaev (2022). Climate-relevant ocean transport measurements in the Atlantic and Arctic Oceans. Pp. 10–11 in *Frontiers in Ocean Observing: Documenting Ecosystems, Understanding Environmental Changes, Forecasting Hazards*. E.S. Kappel, S.K. Juniper, S. Seeyave, E. Smith, and M. Visbeck, eds, *A Supplement to Oceanography* 34(4), <https://doi.org/10.5670/oceanog.2021.supplement.02-04>,

Chomiak, L. N., Yashayaev, I., Volkov, D. L., Schmid, C., & Hooper, J. A. (2022). Inferring Advective Timescales and Overturning Pathways of the Deep Western Boundary Current in the North Atlantic through Labrador Sea Water Advection. *Journal of Geophysical Research: Oceans*, 127, <https://doi.org/10.1029/2022JC018892>.

Dong, S., D.L. Volkov, G. Goni, K. Pujiana, F. Tagklis, and M. Baringer. Remote impact of the equatorial Pacific on Florida Current transport. *Geophysical Research Letters*, 49(4):e2021GL096944 (<https://doi.org/10.1029/2021GL096944>) (2022).

Volkov, D.L., S. Dong, J. Willis, W. Hobbs, W. Johns, D.A. Smeed, B.I. Moat, Y. Fu, S. Lozier, M. Kersalé, R.C. Perez, D. Rayner, E. Frajka-Williams, and G. Goni (2022). Global oceans: Meridional overturning circulation and heat transport in the Atlantic Ocean. In *State of the Climate in 2021*, J. Blunden and T. Boyer (eds.). Bulletin of the American Meteorological Society, 103(8):S175-178 (<https://doi.org/10.1175/BAMS-D-22-0072.1>)

Xu, Y., Wanninkhof, R., Osborne, E., Baringer, M., Barbero, L., Cai, J., & Hooper, J. (2022). Inorganic Carbon Transport and Dynamics in the Florida Straits. *Journal of Geophysical Research: Oceans*, 127(10), e2022JC018405. <https://doi.org/10.1029/2022JC018405>

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Chidichimo, M.P., A.R. Piola, C.S. Meinen, R.C. Perez, E.J.D. Campos, S. Dong, R. Lumpkin, and S.L. Garzoli. Brazil Current volume transport variability during 2009-2015 from a long-term moored array at 34.5°S. *Journal of Geophysical Research–Oceans*, 126(5):e2020JC017146 (<https://doi.org/10.1029/2020JC017146>) (2021).

Morris, T., D. Rudnick, J. Sprintall, J. Hermes, G. J. Goni, J. Parks, F. Bringas, E. Heslop, and the numerous contributors to the OCG-12 Boundary Current Workshop and OceanGliders BOON Project. 2021. Monitoring boundary currents using ocean observing infrastructure. Pp. 16–17 in *Frontiers in Ocean Observing: Documenting Ecosystems, Understanding Environmental Changes, Forecasting Hazards*. E.S. Kappel, S.K. Juniper, S. Seeyave, E. Smith, and M. Visbeck, eds, A Supplement to *Oceanography* 34(4), <https://doi.org/10.5670/oceanog.2021.supplement.02-07>.

Volkov, D. L., S. Dong, M. Lankhorst, M. Kersalé, A. Sanchez-Franks, C. Schmid, J. Herrford, R. C. Perez, B. I. Moat, P. Brandt, C. S. Meinen, M. O. Baringer, E. Frajka-Williams, and D. Smeed (2021): Meridional overturning circulation and heat transport in the Atlantic Ocean [in “State of the Climate in 2020”]. *Bull. Amer. Meteor. Soc.*, 102(8): S176-S179, doi: <https://doi.org/10.1175/BAMS-D-21-0083.1>.

## **2020**

McCarthy, G. D., Brown, P. J., Flagg, C. N., Goni, G., Houpert, L., Hughes, C. W., Hummels, R., Inall, M., Jochumsen, K., H. Larsen, K. M., Lherminier, P., Meinen, C. S., Moat, B. I., Rayner, D., Rhein, M., Roessler, A., Schmid, C., & Smeed, D. A. (2020). Sustainable

Observations of the AMOC: Methodology and Technology. *Reviews of Geophysics*, 58(1), e2019RG000654. <https://doi.org/10.1029/2019RG000654>

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Moat B.I., D.A. Smeed, E. Frajka-Williams, D.G. Desbruyères, C. Beaulieu, W.E. Johns, D. Rayner, A. Sanchez-Franks, M.O. Baringer, D.L. Volkov, L.C. Jackson, H.L. Bryden (2020), Pending recovery in the strength of the meridional overturning circulation at 26° N, *Ocean Sciences*, 16, 863–874, (<https://doi.org/10.5194/os-16-863-2020>).

Volkov, D.L., Domingues, R., Meinen, C. S., Garcia, R., Baringer, M., Goni, G., & Smith, R. H.. 2020. Inferring Florida Current volume transport from satellite altimetry. *Journal of Geophysical Research: Oceans*, 125, e2020JC016763. (<https://doi.org/10.1029/2020JC016763>). [PDF](#).

Volkov D.L. , C.S. Meinen, C. Schmid, B. Moat, M. Lankhorst, S. Dong, F. Li, W. Johns, S. Lozier, R. Perez, G. Goni, M. Kersale, E. Frajka-Williams, M. Baringer, D. Smeed, D. Rayner, A. Sanchez-Franks, U. Send (2020), Atlantic meridional overturning circulation and associated heat transport, [In: State of the Climate 2019], *Bull. Am. Met. Soc.*, 101(8), S159-S163, (<https://doi.org/10.1175/BAMS-D-20-0105.1>). [PDF](#).

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Domingues, R.M., W.E. Johns, and C.S. Meinen. (2019) Mechanisms of eddy-driven variability of the Florida Current. *Journal of Physical Oceanography*, 49(5):1319-1338, doi:[10.1175/JPO-D-18-0192.1](https://doi.org/10.1175/JPO-D-18-0192.1)

Frajka-Williams, E., I.J. Ansorge, J. Baehr, H.L. Bryden, [...], D. Volkov, C. Wilson (2019), Atlantic Meridional Overturning Circulation: Observed transports and variability, *Front. Mar. Sci.*, Vol. 6, (<https://doi.org/10.3389/fmars.2019.00260>). [PDF](#).

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