

Fragen zum Klimawandel - (AC)³-WissenschaftlerInnen antworten.



Fact Sheet „Hat die Erwärmung der Arktis Einfluss auf unser Wetter?“

- Literatur -

- 1** Crasemann, B., Handorf, D., Jaiser, R., Dethloff, K.; Nakamura, T., Ukita, J. and Yamazaki, K. (2017). Can preferred atmospheric circulation patterns over the North-Atlantic-Eurasian region be associated with arctic sea ice loss? *Polar Science*, 14, 9-20, <https://doi.org/10.1016/j.polar.2017.09.002>
- 2** Rantanen, M., Karpechko, A.Y., Lipponen, A. et al. (2022). The Arctic has warmed nearly four times faster than the globe since 1979. *Nature Communication Earth and Environment*, 3, 168, <https://doi.org/10.1038/s43247-022-00498-3>
- 3** Wu, Q., Kang, C., Chen, Y. et al. (2023). Significant weakening effects of Arctic sea ice loss on the summer western hemisphere polar jet stream and troposphere vertical wind shear. *Climate Dynamics*, 61, 4491–4513, <https://doi.org/10.1007/s00382-023-06812-9>
- 4** Francis, J. A., and Vavrus, S. J. (2015). Evidence for a wavier jet stream in response to rapid Arctic warming. *Environmental Research Letters*, 10, 014005, <https://doi.org/10.1088/1748-9326/10/1/014005>
- 5** Jaiser, R., Dethloff, K., Handorf, D., Rinke, A., and Cohen, J. (2012). Impact of sea ice cover changes on the Northern Hemisphere atmospheric winter circulation. *Tellus A: Dynamic Meteorology and Oceanography*, 64, 11595, <https://doi.org/10.3402/tellusa.v64i0.1159>
- 6** Jaiser, R., Dethloff, K., and Handorf, D. (2013). Stratospheric response to Arctic sea ice retreat and associated planetary wave propagation changes. *Tellus A: Dynamic Meteorology and Oceanography*, 65, 19375, <https://doi.org/10.3402/tellusa.v65i0.1937>
- 7** Dethloff, K., Handorf, D., Jaiser, R., Rinke, A., and Klinghammer, P. (2019). Dynamical mechanisms of Arctic amplification. *Annals N.Y. Academy of Science*, 1436, 184-194, <https://doi.org/10.1111/nyas.13698>
- 8** Kretschmer, M., Cohen, J., Matthias, V. et al. (2018). The different stratospheric influence on cold-extremes in Eurasia and North America. *npj Climate Atmospheric Sciences*, 1, 44, <https://doi.org/10.1038/s41612-018-0054-4>

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