

Dr. Ralf Jaiser

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Scientific degree

- 2013 **PhD in Physics, Universität Potsdam**
“Dreidimensionale Diagnostik der großskaligen Zirkulation der Tropo- und Stratosphäre” (“Three-dimensional diagnostics of the large-scale circulation in the troposphere and stratosphere”)
- 2010 **Diploma in Physics, Universität Potsdam**
“Diagnostik großskaliger atmosphärischer Prozesse auf der Basis von Reanalyse- und Modelldaten” (“Diagnostics of large-scale atmospheric processes based on reanalysis and model data”)

Academic Career

- since 07/2013 **Post-Doc at Alfred-Wegener-Institut Helmholtz-Zentrum für Polar- und Meeresforschung (AWI)**
since 2020: Principal Investigator and Project Coordinator of BMBF-funded MOSAiC-related project „SynopSys – Synoptic events during MOSAiC and their Forecast Reliability in the Troposphere-Stratosphere System“
2020: Participant of MOSAiC leg 3 in Team ATMOS performing balloon measurements; Data speaker for MOSAiC Team Modelling
2018 – 2019: Post-Doc in the BMBF-funded German-Russian project “QUAntifying Rapid Climate Change in the Arctic: regional feedbacks and large-scale impacts” (QUARCCS); awarded as top-level research project in 2020 within the framework of the competition “Building Bridges for German-Russian Cooperation in Higher Education and Science”
2015 – 2017: Research fellow with the Helmholtz Climate Initiative REKLIM: Analysis of model experiments regarding linkages between the Arctic and mid-latitudes
2013 – 2015: Research on the impact of Arctic anomalies on the global atmospheric circulation with a focus on knowledge transfer coordinated under the Helmholtz Association’s initiative “Earth System Knowledge Platform” (ESKP)
- 07/2010 – 06/2013 **PhD student at AWI**
01/2012: Public relations activities in print, radio and television related to the publication “Impact of sea ice cover changes on the Northern Hemisphere atmospheric winter circulation” in Tellus A
10/2010 – 03/2011: Teaching the seminar “Dekadische Klimavariabilität” (“Decadal climate variability”)

Publications (most relevant)

Overland, J. E., Ballinger, T. J., Cohen, J., Francis, J. A., Hanna, E., Jaiser, R., ... & Zhang, X. (2021). How do intermittency and simultaneous processes obfuscate the Arctic influence on midlatitude winter extreme weather events?. *Environmental Research Letters*, 16(4), 043002. DOI: [10.1088/1748-9326/abdb5d](https://doi.org/10.1088/1748-9326/abdb5d)

Romanowsky, E., Handorf, D., Jaiser, R., Wohltmann, I., Dorn, W., Ukita, J., Cohen, J., Dethloff, K. & Rex, M. (2019). The role of stratospheric ozone for Arctic-midlatitude linkages. *Scientific reports*, 9(1), 7962. DOI: [10.1038/s41598-019-43823-1](https://doi.org/10.1038/s41598-019-43823-1)

Hoshi, K., Ukita, J., Honda, M., Nakamura, T., Yamazaki, K., Miyoshi, Y., & Jaiser, R. (2019). Weak Stratospheric Polar Vortex Events Modulated by the Arctic Sea-Ice Loss. *Journal of Geophysical Research: Atmospheres*, 124(2), 858-869. DOI: [10.1029/2018JD029222](https://doi.org/10.1029/2018JD029222)

Jaiser, R., Nakamura, T., Handorf, D., Dethloff, K., Ukita, J., & Yamazaki, K. (2016). Atmospheric winter response to Arctic sea ice changes in reanalysis data and model simulations. *Journal of Geophysical Research: Atmospheres*, 121(13), 7564-7577. DOI: [10.1002/2015jd024679](https://doi.org/10.1002/2015jd024679)

Jaiser, R., Dethloff, K., & Handorf, D. (2013). Stratospheric response to Arctic sea ice retreat and associated planetary wave propagation changes. *Tellus A: Dynamic Meteorology and Oceanography*, 65(1), 19375. DOI: [10.3402/tellusa.v65i0.19375](https://doi.org/10.3402/tellusa.v65i0.19375)

Jaiser, R., Dethloff, K., Handorf, D., Rinke, A., & Cohen, J. (2012). Impact of sea ice cover changes on the Northern Hemisphere atmospheric winter circulation. *Tellus A: Dynamic Meteorology and Oceanography*, 64(1), 11595. DOI: [10.3402/tellusa.v64i0.11595](https://doi.org/10.3402/tellusa.v64i0.11595)

Other Publications:

Jaiser, R., & Handorf, D. (2018). Arctic Sea Ice Change, Large-Scale Atmospheric Circulation Patterns and Extreme Climate and Weather in Europe. In *Building Bridges at the Science-Stakeholder Interface* (pp. 95-100). Springer, Cham. DOI: [10.1007/978-3-319-75919-7](https://doi.org/10.1007/978-3-319-75919-7)

Expert contribution to "World Ocean Review 6: The Arctic and Antarctic – Extreme, Climatically Crucial and In Crisis" <https://worldoceanreview.com/en/wor-6/>

Expert contribution to „Wenn der Jetstream holpert“ on german television station 3Sat (2019-12-09) <https://www.3sat.de/wissen/nano/191209-jetstream-nano-104.html>

Expert contribution to „Was, wenn es kein Eis mehr gäbe?“ on german television station arte (2021-11-06) <https://www.arte.tv/de/videos/101940-008-A/was-wenn-es-kein-eis-mehr-gaebe/>

Profiles:

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publons: [AAS-3899-2021](https://publons.com/aas-3899-2021)

[ResearchGate](https://www.researchgate.net/profile/Ralf-Jaiser)