

Aiko Voigt - Publications before University of Vienna

Advised students and postdocs are indicated by *.

Peer-reviewed journal articles

50. **Voigt, A.**, N. Albern*, P. Ceppi, K. Grise, Y. Li, and B. Medeiros, 2021: Cloud-radiation-circulation coupling and its role for climate and climate change, invited review for *WIREs Climate Change*, 12:e694.
49. Wolf, F., **A. Voigt**, and R. V. Donner, 2021: A climate network perspective on the intertropical convergence zone, *Earth System Dynamics*, 12, 353–366.
48. Biasutti, M., R. D. Russotto, **A. Voigt**, and C. C. Blackmon-Luca, 2021: The Effect of an Equatorial Continent on the Tropical Rain Belt. Part I: Annual Mean Changes in the ITCZ, *Journal of Climate*, 34, 5813–5828.
47. Albern, N.* , **A. Voigt**, D. W. J. Thompson, J. G. Pinto, 2020: The role of tropical, midlatitude and polar cloud-radiative changes for the midlatitude circulation response to global warming, *Journal of Climate*, 33, 7927–7943.
46. Senf, F., **A. Voigt**, N. Clerbaux, A. Hünerbein, and H. Deneke, 2020: Increasing resolution and resolving convection improves the simulation of cloud-radiative effects over the North Atlantic, *Journal Geophysical Research - Atmospheres*, 125, e2020JD032667.
45. Papasileiou, G.* , **A. Voigt**, and P. Knippertz, 2020: The role of observed cloud-radiative anomalies for the dynamics of the North Atlantic Oscillation on synoptic time-scales, *Quarterly Journal of the Meteorological Society*, 146, 1822–1841.
44. Stevens, B. and 57 co-authors including **A. Voigt**, 2020: The Added Value of Large-eddy and Storm-resolving Models for Simulating Clouds and Precipitation, *Journal of the Meteorological Society of Japan*, 98, 395–435 .
43. Biasutti, M., and **A. Voigt**, 2020: Seasonal and CO₂-induced shifts of the ITCZ: testing energetic controls in idealized simulations with comprehensive models, *Journal of Climate*, 33, 2853–2870.
42. **Voigt, A.**, and N. Albern*, 2019: No Cookie for Climate Change, *Geophysical Research Letters*, 46, 14751–14761.
41. Albern, N.* , **A. Voigt**, and J. Pinto, 2019: Cloud-radiative impact on the regional responses of the mid-latitude jet streams and storm tracks to global warming, *Journal of Advances in Modeling Earth Systems*, 11, 1940–1958.
40. Maher, P., E. Gerber, B. Medeiros, T. Merlis, S. Sherwood, A. Sheshadri, A. Sobel, G. Vallis, **A. Voigt**, and P. Zurita-Gotor, 2019: Model hierarchies for understanding atmospheric circulation, *Reviews of Geophysics*, 57, 250–280.
39. **Voigt, A.**, N. Albern*, and G. Papavasileiou*, 2019: The atmospheric pathway of the cloud-radiative impact on the circulation response to global warming: important and uncertain, *Journal of Climate*, 32, 3051–3067.
38. Mauritsen, T. and 68 co-authors including **A. Voigt**, 2019: Developments in the MPI-M Earth System Model version 1.2 (MPI-ESM1.2) and its response to increasing CO₂, *Journal of Advances in Modeling Earth Systems*, 11, 998–1038.
37. Albern, N.* , **A. Voigt**, S. A. Buehler, and V. Grützun, 2018: Robust and Nonrobust Impacts of Atmospheric Cloud-Radiative Interactions on the Tropical Circulation and Its Response to Surface Warming, *Geophysical Research Letters*, 45, 8577–8585.
36. Biasutti, M., **A. Voigt**, W. R. Boos, P. Braconnot, J. C. Hargreaves, S. P. Harrison, S. M. Kang, B. E. Mapes, J. Scheff, C. Schumacher, A. H. Sobel, and S.-P. Xie, 2018: Global energetics and local physics as drivers of past, present and future monsoons, *Nature Geoscience*, 11, 392–400.
35. Schäfer, S. A. K* , and **A. Voigt**, 2018: Radiation weakens idealized mid-latitude cyclones, *Geophysical Research Letters*, 45, 2833–2841.
34. Lipat, B. R.* , **A. Voigt**, G. Tselioudis, and L.M. Polvani, 2018: Model uncertainty in cloud-circulation

- coupling, and cloud-radiative response to increasing CO₂, linked to biases in the climatological circulation, *Journal of Climate*, 31, 10013–10020.
33. Hoffman, P. F., D. S. Abbot, Y. Ashkenazy, D. I. Benn, J. J. Brocks, P. A. Cohen, G. M. Cox, J. R. Creveling, Y. Donnadieu, D. H. Erwin, I. J. Fairchild, D. Ferreira, J. C. Goodman, G. P. Halverson, M. F. Jansen, G. Le Hir, G. D. Love, F. A. Macdonald, A. C. Maloof, C. A. Partin, G. Ramstein, B. E. J. Rose, C. V. Rose, P. M. Sadler, E. Tziperman, **A. Voigt**, and S. G. Warren, 2017: Snowball Earth climate dynamics and Cryogenian geology-geobiology, *Science Advances*, 3, e1600983.
 32. **Voigt, A.**, R. Pincus, B. Stevens, S. Bony, O. Boucher, N. Bellouin, A. Lewinschal, B. Medeiros, Z. Wang, H. Zhang, 2016: Fast and slow shifts of the zonal-mean intertropical convergence zone in response to an idealized anthropogenic aerosol, *Journal of Advances in Modeling Earth Systems*, 9, 870–892.
 31. **Voigt, A.**, M. Biasutti, J. Scheff, J. Bader, S. Bordoni, F. Codron, R. D. Dixon, J. Jonas, S. M. Kang, N. P. Klingaman, L. R. Leung, J. Lu, B. Mapes, E. A. Maroon, S. McDermid, J.-y. Park, R. Roehrig, B. E. J. Rose, G. L. Russell, J. Seo, T. Toniazzo, H.-H. Wei, M. Yoshimori, L. R. V. Zepetello*, 2016: The Tropical Rain belts with an Annual cycle and a Continent Model Intercomparison Project: TRACMIP, *Journal of Advances in Modeling Earth Systems*, 8, 1868–1891.
 30. Bony, S., B. Stevens, D. Coppin, T. Becker, K. A. Reed, **A. Voigt**, and B. Medeiros, 2016: Thermodynamic control of anvil-cloud amount, *Proceedings of the National Academy of Sciences*, 113, 8927–8932.
 29. **Voigt, A.**, and T. A. Shaw, 2016: Impact of regional atmospheric cloud-radiative changes on shifts of the extratropical jet stream in response to global warming, *Journal of Climate*, 29, 8399–8421.
 28. Shaw, T. A., E. Barnes, M. Baldwin, R. Caballero, C. Garfinkel, Y.-T. Hwang, C. Li, P. O’Gorman, G. Rivière, I. Simpson, and **A. Voigt**, 2016: Storm track processes and the opposing influences of climate change, *Nature Geoscience*, 9, 656–664.
 27. Shaw, T. A., and **A. Voigt**, 2016: Understanding the links between subtropical and extratropical circulation responses to climate change using aquaplanet model simulations, *Journal of Climate*, 29, 6637–6657.
 26. Shaw, T. A., and **A. Voigt**, 2016: Land dominates the regional response to CO₂ direct radiative forcing, *Geophysical Research Letters*, 43, 11383–11391.
 25. Shaw, T. A. and **A. Voigt**, 2016: What can moist thermodynamics tell us about circulation shifts in response to uniform warming?, *Geophysical Research Letters*, 43, 4566–4575.
 24. Shaw, T. A., **A. Voigt**, S. Kang, and J. Seo, 2015: Response of the intertropical convergence zone to zonally-asymmetric subtropical surface forcings, *Geophysical Research Letters*, 42, 9961–9969.
 23. Shaw, T. A., and **A. Voigt**, 2015: Tug of war on summertime circulation between radiative forcing and sea-surface warming, *Nature Geoscience*, 8, 560–566.
 22. **Voigt, A.**, and T. A. Shaw, 2015: Circulation response to warming shaped by radiative changes of clouds and water vapor, *Nature Geoscience*, 8, 102–106.
 21. Tomassini, L., **A. Voigt**, and B. Stevens, 2014: On the connection between tropical circulation, convective mixing, and climate sensitivity, *Quarterly Journal of the Royal Meteorological Society*, 141, 1404–1416.
 20. **Voigt, A.**, S. Bony, J.-L. Dufresne, and B. Stevens, 2014: The radiative impact of clouds on the shift of the inter-tropical convergence zone, *Geophysical Research Letters*, 41, 4308–4315.
 19. **Voigt, A.**, B. Stevens, J. Bader, and T. Mauritsen, 2014: Compensation of hemispheric albedo asymmetries by shifts of the ITCZ and tropical clouds, *Journal of Climate*, 27, 1029–1045.
 18. Abbot, D.S., **A. Voigt**, D. Li, G. Le Hir, R.T. Pierrehumbert, M. Branson, D. Pollard, and D. D. B. Koll, 2013: Robust elements of Snowball Earth atmospheric circulation and oases for life, *Journal of Geophysical Research-Atmospheres*, 118, 6017–6027.
 17. Bader, J., M. Flügge, N. G. Kvamsto, M. d. S. Mesquita, and **A. Voigt**, 2013: Atmospheric winter response to a projected future Antarctic sea-ice reduction: A dynamical analysis, *Climate Dynamics*, 40, 2707–2718.
 16. Meraner, K.*, T. Mauritsen, and **A. Voigt**, 2013: Robust increase in equilibrium climate sensitivity under global warming, *Geophysical Research Letters*, 40, 5944–5948.

15. Popke, D.* , B. Stevens, and **A. Voigt**, 2013: Climate and climate change in a radiative-convective equilibrium version of ECHAM6, *Journal of Advances in Earth System Modelling*, 5, 1–14.
14. Rodehacke, C. B., **A. Voigt**, F. Ziemer, D. S. Abbot, 2013: An open ocean region in Neoproterozoic glaciations would have to be narrow to allow equatorial ice sheets, *Geophysical Research Letters*, 40, 5503–5507.
13. **Voigt, A.**, 2013: The dynamics of the Snowball Earth Hadley circulation for off-equatorial and seasonally varying insolation, *Earth System Dynamics*, 4, 425–438.
12. **Voigt, A.**, B. Stevens, J. Bader, and T. Mauritsen, 2013: The observed hemispheric symmetry in reflected shortwave irradiance, *Journal of Climate*, 26, 468–477.
11. Abbot, D.S., **A. Voigt**, M. Branson, R. T. Pierrehumbert, D. Pollard, G. Le Hir, D. D. B. Koll, 2012: Clouds and Snowball Earth Deglaciation, *Geophysical Research Letters*, 39, L20711.
10. Cowan, N. B., D. S. Abbot, and **A. Voigt**, 2012: A false positive for ocean glint on exoplanets: the latitude-albedo effect, *Astrophysical Journal Letters*, 725:L3.
9. Cowan, N. B., **A. Voigt**, and D. S. Abbot, 2012: Thermal Phases of Earth-Like Planets: Estimating Thermal Inertia from Eccentricity, Obliquity, and Diurnal Forcing, *Astrophysical Journal*, 757, 80.
8. **Voigt, A.** and D. S. Abbot, 2012: Sea-ice dynamics strongly promote Snowball Earth initiation and destabilize tropical sea-ice margins, *Climate of the Past*, 8, 2079–2092.
7. **Voigt, A.**, I. M. Held, and J. Marotzke, 2012: Hadley cell dynamics in a virtually dry Snowball Earth atmosphere, *Journal of Atmospheric Sciences*, 69, 116–128.
6. Abbot, D. S., **A. Voigt**, and D. Koll, 2011: The Jormungand Global Climate State and Implications for Neoproterozoic Glaciations, *Journal of Geophysical Research-Atmospheres*, 116, D18103.
5. Pierrehumbert, R.T., D.S. Abbot, **A. Voigt**, and D. Koll, 2011: Climate of the Neoproterozoic, *Annual Reviews of Earth and Planetary Sciences*, 39, 417–460.
4. **Voigt, A.**, D. S. Abbot, R. T. Pierrehumbert, and J. Marotzke, 2011: Initiation of a Marinoan Snowball Earth in a state-of-the-art atmosphere-ocean general circulation model, *Climate of the Past*, 7, 249–263.
3. **Voigt, A.** and J. Marotzke, 2010: The transition from the present-day climate to a modern Snowball Earth, *Climate Dynamics*, 35, 887–905.
2. Nagakawa, Y., **A. Voigt**, E. M. Ilgenfritz, M. Müller-Preussker, A. Nakamura, T. Saito, A. Sternbeck, H. Toki, 2009: Coulomb-gauge ghost and gluon propagators in SU(3) lattice Yang-Mills theory, *Physical Reviews D*, 79, 114504.
1. **Voigt, A.**, E. M. Ilgenfritz, M. Müller-Preussker, and A. Sternbeck, 2008: The Effective Coulomb potential in SU(3) lattice Yang-Mills theory, *Physical Reviews D*, 78, 014501.

Peer-reviewed book chapters

1. Donohoe, A., and **A. Voigt**, 2017: Why Future Shifts in Tropical Precipitation Will Likely Be Small: The Location of the Tropical Rain Belt and the Hemispheric Contrast of Energy Input to the Atmosphere, in Wang, S.-Y. J.-H. Yoon, C. Funk and R.R. Gillies (eds.), *Climate extremes: patterns and mechanisms*, *AGU Geophysical Monograph Book Series*, 226, 115–137.

Other publications

3. Biasutti, M., **Voigt, A.**, B. R. Lavon, J. Scheff, 2017: Sources of inter-model scatter in TRACMIP, the Tropical Rain belts with an Annual cycle and a Continent Model Intercomparison Project, *AMS Atmosphere and Ocean Fluid Dynamics 2017*, extended abstract, <https://arxiv.org/abs/1707.08916>.
2. **Voigt, A.**, 2010: Snowball Earth - Initiation and Hadley Cell Dynamics, PhD Thesis, *Reports on Earth System Science*, 83, Max Planck Institute for Meteorology, ISSN 1614-1199, 129 pp.
1. **Voigt, A.**, E. M. Ilgenfritz, M. Müller-Preussker, and A. Sternbeck, 2007: Coulomb gauge studies of SU(3) Yang-Mills theory on the lattice, *PoS LAT2007*, 338.