

## Publications

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### *Refereed Journals*

#### **2017:**

- **Klinger, C.**, Mayer, B., Jakub, F., Zinner, T., Park, S.-B., and Gentine, P.: Effects of 3-D thermal radiation on the development of a shallow cumulus cloud field, Atmos. Chem. Phys., 17, 5477-5500, <http://dx.doi.org/10.5194/acp-17-5477-2017>, 2017.

#### **2016:**

- Schaefer, S. A. K., R. J. Hogan, **C. Klinger**, J. C. Chiu, and B. Mayer (2016), Representing 3D cloud-radiation effects in two-stream schemes: 1. Longwave considerations and effective cloud edge length, J. Geophys. Res. Atmospheres, 121, <http://dx.doi.org/10.1002/2016JD024876>.
- Hogan, R.J., S.A.K. Schaefer, **C. Klinger**, C. Chiu, and B. Mayer (2016), Representing 3D cloud-radiation effects in two-stream schemes: 2. Matrix formulation and broadband evaluation, J. Geophys. Res. Atmos., 121, <http://dx.doi.org/10.1002/2016JD024875>.
- **Carolin Klinger**, Bernhard Mayer, The Neighboring Column Approximation (NCA) – A fast approach for the calculation of 3D thermal heating rates in cloud resolving models, Journal of Quantitative Spectroscopy and Radiative Transfer, Volume 168, January 2016, Pages 17-28, ISSN 0022- 4073, <http://dx.doi.org/10.1016/j.jqsrt.2015.08.020>.

#### **2015:**

- Righi, M., V. Eyring, K.-D. Gottschaldt, **C. Klinger**, F. Frank, P. Jöckel, and I. Cionni, Quantitative evaluation of ozone and selected climate parameters in a set of EMAC simulations, Geosci. Model Dev., 8, 733-768, doi:10.5194/gmd-8-733-2015, 2015.

#### **2014:**

- **Carolin Klinger** , Bernhard Mayer, Three-dimensional Monte Carlo calculation of atmospheric thermal heating rates, Journal of Quantitative Spectroscopy and Radiative Transfer, Volume 144, September 2014, Pages 123-136, ISSN 0022-4073, <http://dx.doi.org/10.1016/j.jqsrt.2014.04.009>.

#### **2011:**

- Righi, M., **C. Klinger**, V. Eyring, J. Hendricks, A. Lauer and A. Petzold, Climate Impact of Biofuels in Shipping: Global Model Studies of the Aerosol Indirect Effect, Environ. Sci. Tech., [dx.doi.org/10.1021.es1036157](http://dx.doi.org/10.1021.es1036157), 2011.

## Others

- R. Sausen, V. Aquila, S. Brinkop, I. Cionni, M. Dameris, R. Deckert, S. Dietmüller, V. Eyring, C. Frömming, H. Garny, K.-D. Gottschaldt, V. Grewe, J. Hendricks, P. Jöckel, **C. Klinger**, S. Matthes, M. Righi, and E. Tsati, Modeling the impact of transport (aviation, ships and land traffic) on the climate in High Performance Computing in Science and Engineering, Garching/Munich 2012 Verlag der Bayerischen Akademie der Wissenschaften, pp. 176-177 (2012).
- Righi, M. and **Klinger, C.** and Eyring, V. and Hendricks, J. and Lauer, A. and A. Petzold (2012) Effects of ship emissions on global and regional aerosol distributions for future low-sulfur scenarios. Proceedings of the 8th International Conference on Air Quality - Science and Application, 19-23 Mar 2012, Athens, Greece.
- Eyring, V., H. Bovensmann, I. Cionni, M. Dall'Amico, K. Franke, I. Khlystova, **C. Klinger**, A. Lauer, A. Paxian, M. Righi, and M. Schreier, Impact of Ship Emissions on Atmosphere and Climate, SeaKLIM Final Report, 2010.
- A. Petzold, V. Eyring, P. Lauer, F. Fleischer, J. Hasselbach, M. Lichtenstern, **C. Klinger**, M. Righi, U. Fritsche, J. Hendricks, M. Dall'Amico, and H. Schlager Reduktion der Emissionen klimarelevanter Gase und Partikeln aus Diesel-Großmotoren für die Schifffahrt und für den stationären Einsatz durch den Einsatz regenerativer Treibstoffe, BIOCLEAN final report (2010).

## Theses

- **Klinger, C.**, Influence of 3D Thermal Radiation on Cloud Development, Dissertation, LMU, Faculty of Physics , December 2015.
- **Klinger, C.**, Evaluation of ozone and selected climate parameters in the chemistry-climate model EMAC, Master Thesis, LMU, Faculty of Physics, December 2011.
- **Klinger, C.**, CO2 Klimawirkung und Minderungspotential für alternative Treibstoffe in der Schifffahrt, Bachelor Thesis, LMU, Faculty of Physics, July 2009.