

Dr. Daniel Kunkel

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EMPLOYMENT

- 12/2015 – Junior lecturer (“Habilitation”) at Institute for Atmospheric Physics, Johannes-Gutenberg University, Mainz, Germany. Main research topics: Tropopause dynamics, UTLS trace gas composition, transport processes from small to large scales, mesoscale and global Eulerian and Lagrangian modelling; Co-PI WISE HALO campaign, Shannon, Ireland.
- 12/2012-11/2015 Post-doctoral researcher at Institute for Atmospheric Physics, Johannes-Gutenberg University, Mainz, Germany. Main research topic: Synoptic-scale wave breaking and its impact on the tropopause structure and cross tropopause transport
- 12/2008-11/2012 Research assistant at Department of Particle Chemistry / Department of Air Chemistry, Max-Planck Institute for Chemistry, Mainz, Germany. Main research topic: Modeling of transport and deposition of trace species from urban agglomerations
- 06/2006-08/2008 Student assistant at Institute of Atmospheric Physics, Johannes-Gutenberg University and Max-Planck Institute for Chemistry, Mainz, Germany. Main research: Participation in AMMA-SCOUT, Ouagadougou, Burkina Faso, analysis of in-situ measured ultrafine particles

EDUCATION

- 01/2013 Dissertation in atmospheric physics (Dr. rer.-nat.)
Thesis: *Global modeling of pollutant transport and deposition from anthropogenic source points on global scale (grade: magna cum laude)*
- 12/2008-11/2012 PhD candidate at Johannes-Gutenberg University and International Max-Planck-Research School
10/2008 Diploma in Meteorology (Diplom-Meteorologe, MSc equivalent)
Thesis: *Ultrafine Particles in the Upper Troposphere and Lower Stratosphere during the 2006 Monsoon Season over West Africa (grade: sehr gut)*
- 08/2007-02/2008 ERASMUS exchange student, Uppsala Sweden
10/2003-10/2008 Studies of Atmospheric Sciences at Johannes-Gutenberg University Mainz, Germany

PUBLICATION LIST (selection)

1. Kunkel, D., Hoor, P., and Wirth, V.: The tropopause inversion layer in baroclinic life cycles experiments: the role of diabatic processes, *Atmos. Chem. Phys.*, 16, 541-560, doi:10.5194/acp-16-541-2016, 2016.
2. Kunkel, D., Hoor, P., Wirth, V.: Can inertia-gravity waves persistently alter the tropopause inversion layer, *Geophys. Res. Lett.*, 41, 7822-7829, doi:10.1002/2014GL061970, 2014.
3. Lelieveld, J., Kunkel, D., and Lawrence, M. G.: Global risk of radioactive fallout after major nuclear reactor accidents, *Atmos. Chem. Phys.*, 12, 4245-4258, doi:10.5194/acp-12-4245-2012, 2012.
4. Kunkel, D., M. G. Lawrence, H. Tost, A. Kerckweg, P. Jöckel, and S. Borrmann: Urban emission hot spots as sources for remote aerosol deposition, *Geophys. Res. Lett.*, 39, L01808, doi:10.1029/2011GL049634, 2012
5. Borrmann, S., Kunkel, D., et al.: Aerosols in the tropical and subtropical UT/LS: in-situ measurements of submicron particle abundance and volatility, *Atmos. Chem. Phys.*, 10, 5573-5592, doi:10.5194/acp-10-5573-2010, 2010.

PROFESSIONAL MEMBERSHIPS

- since 2008 Deutsche Meteorologische Gesellschaft (German Meteorological Society)
- since 2009 European Geophysical Union (EGU)
- since 2013 Co-Convenor of the session “Atmospheric transport of trace species and aerosols: Modeling and observations” at EGU General Assembly
- since 2016 American Meteorological Society (AMS)