

Dr. Bernhard Pospichal

Education

2009	Dr. rer. nat (Meteorology), Universität zu Köln, Germany
2005	Diplom (Meteorology), Universität Wien, Austria

Professional Experience

2016-	Senior scientist, Universität zu Köln, Institut für Geophysik und Meteorologie, Germany
2010 - 2016	Junior professor, Universität Leipzig, Institut für Meteorologie, Germany
2010	Postdoc scientist, Universität für Bodenkultur, Vienna, Austria
2005 - 2009	PhD Student/Scientist, (Universität zu Köln, Universität Bonn and Ludwig-Maximilians-Universität München), Germany

Research Interests

- Microwave radiometry
- Remote sensing of water vapour and clouds
- Remote sensing theory
- Synergy of remote sensing methods

Selected Research Activities

- DFG Infrastructure project "JOYCE Core Facility for clouds and precipitation analysis from ground-based remote sensing"
- BMBF, HD(CP)², High-resolution cloud and precipitation processes from observations, Project O1, WP2 "Water vapour and entrainment rates"
- COST action TOPROF: Towards Operational ground based PROFiling with ceilometers, Doppler lidars and microwave radiometers for improving weather forecasts. Organisation of J-CAL (Joint Microwave Calibration Experiments) in 2014/2015 with the goal of harmonized calibration and error estimation for passive microwave radiometers.
- OCEANET program, Mobile Ocean Station of TROPOS: Measurements with remote sensing instruments on board of the German research vessels "Polarstern" and "Meteor". Coordination of microwave radiometer measurements, chief scientist of Polarstern cruise PS98 in 2016
- AMMA – African Monsoon Multidisciplinary Analyses

Supervision of PhD Theses

2017	Andreas Foth	Water vapor profiles from Raman lidar and Microwave radiometers
2016	Daniel Merk	Indirect aerosol effect: diagnostics from combination of ground and satellite remote sensing data

Peer-reviewed Publications

20. Frank, C., S. Wahl, J. Keller, **B. Pospichal**, A. Hense, S. Crewell, 2018: Bias correction of a novel European reanalysis data set for solar energy applications. *Solar Energy*, **164**, 12-24

19. De Angelis F., D. Cimini, U. Löhnert, O. Caumont, A. Haefele, **B. Pospichal**, P. Martinet, F. Navas Guzmán, H. Klein-Baltink, J-C. Dupont, J. Hocking, 2017: Long-Term observations minus background monitoring of ground-based brightness temperatures from a microwave radiometer network. *Atmos. Meas. Tech.*, **10**, 3947–3961, doi: 10.5194/amt-10-3947-2017
18. Foth A., **B. Pospichal**, 2017: Optimal estimation of water vapour profiles using a combination of Raman lidar and microwave radiometer. *Atmos. Meas. Tech.*, **10**, 3325–3344, doi: 10.5194/amt-10-3325-2017
17. Neher I., T. Buchmann, S. Crewell, B. Evers-Dietze, K. Pfeilsticker, **B. Pospichal**, C. Schirrmeister, S. Meilinger, 2017: Impact of atmospheric aerosols on photovoltaic energy production Scenario for the Sahel zone. *Energy Procedia*, **125**, 170–179, doi: 10.1016/j.egypro.2017.08.168
16. Heinze R., et al. (45 authors) 2017: Large-eddy simulations over Germany using ICON: a comprehensive evaluation: Evaluation of ICON in Realistic LES Configuration. *Quarterly Journal of the Royal Meteorological Society*, **143**, 69–100. doi: 10.1002/qj.2947
15. Merk D., H. Deneke, **B. Pospichal**, P. Seifert, 2016: Investigation of the adiabatic assumption for estimating cloud micro- and macrophysical properties from satellite and ground observations. *Atmos. Chem. Phys.*, **16**, 933–952, doi: 10.5194/acp-16-933-2016
14. Massaro G., I. Stiperski, **B. Pospichal**, M. Rotach, 2015: Accuracy of retrieving temperature and humidity profiles by ground-based microwave radiometry in truly complex terrain. *Atmos. Meas. Tech.*, **8**, 3355–3367, doi: 10.5194/amt-8-3355-2015
13. Foth A., H. Baars, P. di Girolamo, **B. Pospichal**, 2015: Water vapour profiles from Raman lidar automatically calibrated by microwave radiometer data during HOPE. *Atmos. Chem. Phys.*, **15**, 7753–7763, doi:10.5194/acp-15-7753-2015
12. Berger, T., C. Amann, H. Formayer, A. Korjenic, **B. Pospichal**, C. Neururer, R. Smutny, 2015: Impacts of external insulation and reduced internal heat loads upon energy demand of offices in the context of climate change in Vienna, Austria. *Journal of Building Engineering*, **5**, 86–95. doi: 10.1016/j.jobe.2015.11.005
11. Brückner, M., **B. Pospichal**, A. Macke, M. Wendisch, 2014: A New Multi-Spectral Cloud Retrieval Method for Ship-based Solar Transmissivity Measurements. *J. Geophys. Res.*, **119**, 11338–11354. doi: 10.1002/2014JD021775
10. Berger, T., C. Amann, H. Formayer, A. Korjenic, **B. Pospichal**, C. Neururer, 2014: Impacts of climate change upon cooling and heating energy demand of office buildings in Vienna, Austria. *Energy and Buildings*, **80**, 517–530. doi: 10.1016/j.enbuild.2014.03.084
9. Berger, T., C. Amann, H. Formayer, A. Korjenic, **B. Pospichal**, C. Neururer, 2014: Impacts of urban location and climate change upon energy demand of office buildings in Vienna, Austria. *Building and Environment*, **81**, 258–269. doi: 10.1016/j.buildenv.2014.07.007
8. Dorninger, M., C. D. Whiteman, B. Bica, S. Eisenbach, **B. Pospichal**, and R. Steinacker, 2011: Meteorological Events Affecting Cold-Air Pools in a Small Basin. *J. Appl. Meteor. Climatol.*, **50**, 2223–2234. doi: <http://dx.doi.org/10.1175/2011JAMC2681.1>
7. **Pospichal, B.**, D. Bou Karam, S. Crewell, C. Flamant, A. Hünerbein, O. Bock, and F. Said, 2010: Diurnal cycle of the inter-tropical discontinuity over West Africa analysed by remote sensing and mesoscale modelling. *Quarterly Journal of the Royal Meteorological Society*, **136**, 92–106. doi: 10.1002/qj.435

6. Pelon, J., M. Mallet, A. Mariscal, P. Goloub, D. Tanré, D. Bou Karam, C. Flamant, J. Haywood, **B. Pospichal**, and S. Victori (2008), Microlidar observations of biomass burning aerosol over Djougou (Benin) during African Monsoon Multidisciplinary Analysis Special Observation Period 0: Dust and Biomass-Burning Experiment, *J. Geophys. Res.*, **113**, D00C18, doi: 10.1029/2008JD009976.
5. **Pospichal, B.**, and S. Crewell, 2007: Boundary Layer Observations in West Africa using a novel microwave radiometer, *Meteorologische Zeitschrift*, **16**, 513–523
4. Steinacker R., C. D. Whiteman, M. Dorninger, **B. Pospichal**, S. Eisenbach, A. M. Holzer, P. Weihs, E. Mursch-Radlgruber, and K. Baumann, 2007: A Sinkhole Field Experiment in the Eastern Alps. *Bull. Am. Met. Soc.*, **88**, 701–716
3. Whiteman C. D., **B. Pospichal**, S. Eisenbach, P. Weihs., C. B. Clements, R. Steinacker, E. Mursch-Radlgruber, and M. Dorninger, 2004: Inversion breakup in small Rocky Mountain and Alpine basins. *J. Appl. Meteor.*, **43**, 1069–1082
2. Whiteman C. D., T. Haiden, **B. Pospichal**, S. Eisenbach, and R. Steinacker, 2004: Minimum temperatures, diurnal temperature ranges, and temperature inversions in limestone sinkholes of different sizes and shapes. *J. Appl. Meteor.*, **43**, 1224–1236
1. Whiteman, C. D., S. Eisenbach, **B. Pospichal**, and R. Steinacker, 2004: Comparison of vertical soundings and sidewall air temperature measurements in a small Alpine basin. *J. Appl. Meteor.*, **43**, 1635–1647