

## **Dr. Martina Krämer**

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Stratosphere (IEK-7)  
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### **Professional Career**

2012-present	Head of group 'Water Vapor & Clouds' at IEK-7
2000-2011	Head of group 'Clouds' at ICG-1, Research Center Jülich
1996 – 2000	Research Scientist, Inst. for Chem. and Dyn. of the Geosphere: Stratosphere (ICG-1), Research Center Jülich
1992-1996	Research Scientist, Inst. for Physics of the Atmosphere, University of Mainz.
1992	PhD Meteorology, Univ. Mainz
1987	Diploma in Meteorology, Univ. Mainz

### **Research Areas**

- Cloud and Aerosol Physics
- Water Vapor and Cloud Measurements
- Cirrus Cloud Modelling
- Particle and Water Vapor Techniques
- Cloud and Aerosol Particle Sampling

### **Professional Services (selected)**

since 1999	Reviewer for scientific journals (AAQR, ACP, AMT, ASL, AST, Atm.Res., Atm. Sol. Terr., GMD, GRL, JAS, JGR, Jtech, Nature, NPG) and international funding agencies (ERC, EUFAR, FFG-KIRAS, NSF, RCUK, SNF)
since 2003	Convener of - Conference program 'Atmospheric Aerosol' and special sessions at EAC/IAC (Europ./Intern. Aerosol Conf.); - session 'Atmospheric Ice Particles' at EGU (Europ. Geophys. Union)
2006-2010	Vice-president of the 'Gesellschaft für Aerosolforschung' (GAeF)
2007-2012	Member of the GAeF Smoluchowski Award Committee
2009-2012	Chair/Co-Chair of the European Aerosol Assembly (EAA) working group 'Atmospheric Aerosols'
since 2010	Co-Editor for ACP (Atmospheric Physics and Chemistry)
since 2011	IPCC Expert Reviewer
since 2014	Leader of EUFAR expert working group 'Aerosol and Cloud Particle Sampling'
since 2016	Member of ICCP (International Commission of Clouds and Precipitation)

## Publications (10 most important articles)

- Costa, A., Meyer, J., Afchine, A., Luebke, A., Günther, G., Dorsey, J. R., Gallagher, M. W., Ehrlich, A., Wendisch, M., Baumgardner, D., Wex, H., and **Krämer, M.**: Classification of Arctic, Mid-Latitude and Tropical Clouds in the Mixed-Phase Temperature Regime, *Atmos. Chem. Phys.*, 17, 1–20, <https://doi.org/10.5194/acp-17-1-2017>, 2017.
- Heysmsfield, A., M. **Krämer**, A. Luebke, P. Brown, D. Cziczo, C. Franklin, P. Lawson, U. Lohmann, G. McFarquhar, Z. Ulanowski, and K. Van Tricht: Ice Formation and Evolution in Clouds and Precipitation: Measurement and Modeling Challenges, Chapter 2: Cirrus Clouds. *Meteor. Monogr.*, Vol. 58, doi:10.1175/AMSMONOGRAPHS-D-16-0010.1, pp. 2.1-2.26, 2017.
- Krämer, M.**, Rolf, C., Luebke, A., Afchine, A., Spelten, N., Costa, A., Zöger, M., Smith, J., Herman, R., Buchholz, B., Ebert, V., Baumgardner, D., Borrmann, S., Klingebiel, M., and Avallone, L. (2016): A microphysics guide to cirrus clouds – Part 1: Cirrus types, *Atmos. Chem. Phys.*, 16, 3463-3483.
- Luebke, A. E., Afchine, A., Costa, A., Meyer, J., Rolf, C., Spelten, N., Avallone, L. M., Baumgardner, D., and **Krämer, M.** (2016): The origin of midlatitude ice clouds and the resulting influence on their microphysical properties, *Atmos. Chem. Phys.*, 16, 5793-5809.
- Meyer, J., Rolf, C., Schiller, C., Rohs, S., Spelten, N., Afchine, A., Zöger, M., Sitnikov, N., Thornberry, T. D., Rollins, A. W., Bozóki, Z., Tátrai, D., Ebert, V., Kühnreich, B., Mackrodt, P., Möhler, O., Saathoff, H., Rosenlof, K. H., and **Krämer, M.** (2015): Two decades of water vapor measurements with the FISH fluorescence hygrometer: a review, *Atmos. Chem. Phys.*, 15, 8521-8538.
- Krämer, M.**, Twohy, C., Hermann, M., Afchine, A., Dhaniyala, S., and Korolev, A. (2013): Aerosol and cloud particle sampling, in: *Airborne Measurements for Environmental Research: Methods and Instruments*, edited by: Wendisch, M. and Brenguier, J.-L., Wiley-VCH Verlag GmbH & Co. KGaA, 303–341.
- Spichtinger, P. and **Krämer, M.** (2013): Tropical tropopause ice clouds: a dynamic approach to the mystery of low crystal numbers, *Atmos. Chem. Phys.*, 13, 9801–9818.
- Krämer, M.**, Schiller, C., Afchine, A., Bauer, R., Gensch, I., Mangold, A., Schlicht, S., Spelten, N., Sitnikov, N., Borrmann, S., de Reus, M. and P. Spichtinger (2009): Ice supersaturations and cirrus cloud crystal numbers. *Atmos. Chem. Phys.*, 9, 3505-3522.
- Schiller, C., **Krämer, M.**, Afchine, A., Spelten, N. and N. Sitnikov (2008): The ice water content of Arctic, midlatitude and tropical cirrus. *J. Geophys. Res.* 113, D24208, doi:10.1029/2008JD010342.
- Mangold, A., Wagner, R., Saathoff, H., Schurath, U., Giesemann, C., Ebert, V., **Krämer, M.** and O. Möhler (2005): Experimental investigation of ice nucleation by different types of aerosols in the aerosol chamber AIDA: implications to microphysics of cirrus clouds. *Meteorol. Z.*, Vol. 14, No. 4, 485-497.
- Krämer, M.**; Beltz, N.; Schell, D.; Schütz, L.; Sprengart-Eichel, C. and S. Wurzler (2000): Cloud Processing of Continental Aerosol Particles: Experimental Investigations for Different Drop Sizes. *JGR*, 105, No. D9, pp. 11,739-11,752.

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