Dr. Martina Krämer

ResearcherID: A-7482-2013; ORCID ID: 0000-0002-2888-1722

Research Center Jülich
Institute for Energy and Climate Research
Stratosphere (IEK-7)
D – 52425 Jülich, Germany
m.kraemer@fz-juelich.de
Telephone +49 2461 613238

Professional Career

since 2019	Fellow of Gutenberg Research College, University of Mainz, IPA
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 2021	Senior Editor for ACP (Atmospheric Physics and Chemistry)
since 2016	Member of ICCP (International Commission of Clouds and Precipitaion)
2011-2015	IPCC Expert Reviewer
since 2010	Co-Editor for ACP (Atmospheric Physics and Chemistry)
2009-2012	Chair/Co-Chair of the European Aerosol Assembly (EAA) working group 'Atmospheric Aerosols'
2007-2012	Member of the GAeF Smoluchowski Award Committe
2006-2010	Vice-president of the`Gesellschaft für Aerosolforschung' (GAeF)
2003-2018	Convernor of - Conference program 'Atmospheric Aerosol' and special sessions at EAC/IAC (Europ./Intern. Aerosol Conf.); - session 'Atmospheric Ice Particles' at EGU (Europ. Geophys. Union)
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)

Publications (10 most important articles)

Krämer, M., Rolf, C., Spelten, N., Afchine, A., Fahey, D., Jensen, E., Khaykin, S., Kuhn, T., Lawson, P., Lykov, A., Pan, L. L., Riese, M., Rollins, A., Stroh, F., Thornberry, T., Wolf, V., Woods, S., Spichtinger, P., Quaas, J., and Sourdeval, O.: A Microphysics Guide to Cirrus – Part II: Climatologies of Clouds and Humidity from Observations, Atmos. Chem. Phys. 20, 12569–12608, https://doi.org/10.5194/acp-20-12569-2020, 2020. (highlight article)

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.

Heymsfield, 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 approachto 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., Borrman, 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.

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.