

JOYCE-CF based publications

Below you can find a list of publications based on JOYCE-CF data. There might be more JOYCE-CF related publications, but only the strongly related ones are listed below.

2019

S. Steinke, S. Eikenberg, U. Löhnert, G. Dick, D. Klocke, P. Di Girolamo, and S. Crewell. Assessment of small-scale integrated water vapour variability during hope. *Atmospheric Chemistry and Physics*, 15(5):2675–2692, 2015. doi: [10.5194/acp-15-2675-2015](https://doi.org/10.5194/acp-15-2675-2015).

2018

A. J. Illingworth, D. Cimini, A. Haefele, M. Haeffelin, H. Maxime, S. Kotthaus, U. Löhnert, P. Martinet, I. Mattis, E. J. O'Connor, and R. Potthast. How can existing ground-based profiling instruments improve european weather forecasts? *Bulletin of the American Meteorological Society*, 10 2018. doi: [10.1175/BAMSD-17-0231.1](https://doi.org/10.1175/BAMSD-17-0231.1).

N. Kuchler, S. Kneifel, P. Kollias, and U. Löhnert. Revisiting liquid water content retrievals in warm stratified clouds: The modified frisch. *Geophysical Research Letters*, 45(17):9323–9330, 2018. doi: [10.1029/2018GL079845](https://doi.org/10.1029/2018GL079845).

A. J. Manninen, T. Marke, M. Tuononen, and E. J. O'Connor. Atmospheric boundary layer classification with doppler lidar. *Journal of Geophysical Research: Atmospheres*, 123(15):8172–8189, 2018. doi: [10.1029/2017JD028169](https://doi.org/10.1029/2017JD028169).

T. Marke, S. Crewell, V. Schemann, J. H. Schween, and M. Tuononen. Long-term observations and high-resolution modeling of midlatitude nocturnal boundary layer processes connected to low-level jets. *Journal of Applied Meteorology and Climatology*, 57(5):1155–1170, 2018. doi: [10.1175/JAMC-D-17-0341.1](https://doi.org/10.1175/JAMC-D-17-0341.1).

2017

C. Acquistapace, S. Kneifel, U. Löhnert, P. Kollias, M. Maahn, and M. BauerPfundstein. Optimizing observations of drizzle onset with millimeter-wavelength radars. *Atmospheric Measurement Techniques (Online)*, 10(5), 2017. doi: [10.5194/amt-10-1783-2017](https://doi.org/10.5194/amt-10-1783-2017).

F. D. Angelis, D. Cimini, U. Löhnert, O. Caumont, A. Haefele, B. Pospichal, P. Martinet, F. Navas-Guzmán, H. Klein-Baltink, J.-C. Dupont, et al. Long-term observations minus background monitoring of ground-based brightness temperatures from a microwave radiometer network. *Atmospheric Measurement Techniques*, 10(10):3947–3961, 2017. doi: [10.5194/amt-10-3947-2017](https://doi.org/10.5194/amt-10-3947-2017).

- K. Ebell, U. Löhnert, E. Päsche, E. Orlandi, J. Schween, and S. Crewell. A 1-d variational retrieval of temperature, humidity, and liquid cloud properties: Performance under idealized and real conditions. *Journal of Geophysical Research: Atmospheres*, 122(3):1746–1766, 2017. doi: [10.1002/2016JD025945](https://doi.org/10.1002/2016JD025945).
- R. Heinze, A. Dipankar, C. C. Henken, C. Moseley, O. Sourdeval, S. Trömel, X. Xie, P. Adamidis, F. Ament, H. Baars, et al. Large-eddy simulations over germany using icon: a comprehensive evaluation. *Quarterly Journal of the Royal Meteorological Society*, 143(702):69–100, 2017. doi: [10.1002/qj.2947](https://doi.org/10.1002/qj.2947).
- N. Kuchler, S. Kneifel, U. Löhnert, P. Kollias, H. Czekala, and T. Rose. A w-band radar–radiometer system for accurate and continuous monitoring of clouds and precipitation. *Journal of Atmospheric and Oceanic Technology*, 34(11):2375– 2392, 2017. doi: [10.1175/JTECH-D-17-0019.1](https://doi.org/10.1175/JTECH-D-17-0019.1).
- A. Macke, P. Seifert, H. Baars, C. Barthlott, C. Beekmans, A. Behrendt, B. Bohn, M. Brueck, J. Bühl, S. Crewell, et al. The hd(cp)2 observational prototype experiment (hope)—an overview. *Atmospheric Chemistry and Physics*, 17(7): 4887–4914, 2017. doi: [10.5194/acp-17-4887-2017](https://doi.org/10.5194/acp-17-4887-2017).
- A. Ryzhkov, S. Y. Matrosov, V. Melnikov, D. Zrnica, P. Zhang, Q. Cao, M. Knight, C. Simmer, and S. Troemel. Estimation of depolarization ratio using weather radars with simultaneous transmission/reception. *Journal of Applied Meteorology and Climatology*, 56(7):1797–1816, 2017. doi: [10.1175/JAMC-D-16-0098.1](https://doi.org/10.1175/JAMC-D-16-0098.1).
- S. Trömel, A. V. Ryzhkov, M. Diederich, K. Mühlbauer, S. Kneifel, J. Snyder, and C. Simmer. Multisensor characterization of mammatus. *Monthly Weather Review*, 145(1):235–251, 2017. doi: [10.1175/MWR-D-16-0187.1](https://doi.org/10.1175/MWR-D-16-0187.1).

2016

- M. Barrera-Verdejo, S. Crewell, U. Löhnert, E. Orlandi, and P. D. Girolamo. Ground-based lidar and microwave radiometry synergy for high vertical resolution absolute humidity profiling. *Atmospheric Measurement Techniques*, 9(8): 4013–4028, 2016. doi: [10.5194/amt-9-4013-2016](https://doi.org/10.5194/amt-9-4013-2016).
- N. Kuchler, D. Turner, U. Löhnert, and S. Crewell. Calibrating ground-based microwave radiometers: Uncertainty and drifts. *Radio Science*, 51(4):311–327, 2016. doi: [10.1002/2015RS005826](https://doi.org/10.1002/2015RS005826).
- T. Marke, K. Ebell, U. Löhnert, and D. D. Turner. Statistical retrieval of thin liquid cloud microphysical properties using ground-based infrared and microwave observations. *Journal of Geophysical Research: Atmospheres*, 121(24), 2016. doi: [10.1002/2016JD025667](https://doi.org/10.1002/2016JD025667).
- A. Ryzhkov, P. Zhang, H. Reeves, M. Kumjian, T. Tschallener, S. Trömel, and C. Simmer. Quasi-vertical profiles—a new way to look at polarimetric radar data. *Journal of Atmospheric and Oceanic Technology*, 33(3):551–562, 2016. doi: [10.1175/JTECH-D-15-0020.1](https://doi.org/10.1175/JTECH-D-15-0020.1).
- U. Saeed, F. Rocadenbosch, and S. Crewell. Adaptive estimation of the stable boundary layer height using combined lidar and microwave radiometer observations. *IEEE Transactions on*

Geoscience and Remote Sensing, 54(12):6895–6906, 2016. doi: [10.1109/TGRS.2016.2586298](https://doi.org/10.1109/TGRS.2016.2586298).

- A. Schickling, M. Matveeva, A. Damm, J. H. Schween, A. Wahner, A. Graf, S. Crewell, and U. Rascher. Combining sun-induced chlorophyll fluorescence and photochemical reflectance index improves diurnal modeling of gross primary productivity. *Remote Sensing*, 8(7):574, 2016. doi: [10.3390/rs8070574](https://doi.org/10.3390/rs8070574).
- C. Simmer, G. Adrian, S. Jones, V. Wirth, M. Göber, C. Hohenegger, T. Janjic, J. Keller, C. Ohlwein, A. Seifert, et al. Herz: The german hans-ertel centre for weather research. *Bulletin of the American Meteorological Society*, 97(6): 1057–1068, 2016. doi: [10.1175/BAMS-D-13-00227.1](https://doi.org/10.1175/BAMS-D-13-00227.1).
- X. Xie, R. Evaristo, C. Simmer, J. Handwerker, and S. Trömel. Precipitation and microphysical processes observed by three polarimetric x-band radars and ground-based instrumentation during hope. *Atmospheric Chemistry and Physics*, 16(11):7105–7116, 2016a. doi: [10.5194/acp-16-7105-2016](https://doi.org/10.5194/acp-16-7105-2016).
- X. Xie, R. Evaristo, S. Troemel, P. Saavedra, C. Simmer, and A. Ryzhkov. Radar observation of evaporation and implications for quantitative precipitation and cooling rate estimation. *Journal of Atmospheric and Oceanic Technology*, 33(8): 1779–1792, 2016b. doi: [10.1175/JTECH-D-15-0244.1](https://doi.org/10.1175/JTECH-D-15-0244.1).

2015

- G. Corbetta, E. Orlandi, T. Heus, R. Neggers, and S. Crewell. Overlap statistics of shallow boundary layer clouds: Comparing ground-based observations with large-eddy simulations. *Geophysical Research Letters*, 42(19):8185–8191, 2015. doi: [10.1002/2015GL065140](https://doi.org/10.1002/2015GL065140).
- M. Diederich, A. Ryzhkov, C. Simmer, P. Zhang, and S. Trömel. Use of specific attenuation for rainfall measurement at x-band radar wavelengths. part i: Radar calibration and partial beam blockage estimation. *Journal of Hydrometeorology*, 16(2):487–502, 2015a. doi: [10.1175/JHM-D-14-0066.1](https://doi.org/10.1175/JHM-D-14-0066.1).
- M. Diederich, A. Ryzhkov, C. Simmer, P. Zhang, and S. Trömel. Use of specific attenuation for rainfall measurement at x-band radar wavelengths. part ii: Rainfall estimates and comparison with rain gauges. *Journal of Hydrometeorology*, 16(2):503–516, 2015b. doi: [10.1175/JHM-D-14-0067.1](https://doi.org/10.1175/JHM-D-14-0067.1).
- U. Löhnert, J. Schween, C. Acquistapace, K. Ebell, M. Maahn, M. BarreraVerdejo, A. Hirsikko, B. Bohn, A. Knaps, E. O’connor, et al. Joyce: Jülich observatory for cloud evolution. *Bulletin of the American Meteorological Society*, 96(7):1157–1174, 2015. doi: [10.1175/BAMS-D-14-00105.1](https://doi.org/10.1175/BAMS-D-14-00105.1).
- C. Simmer, I. Thiele-Eich, M. Masbou, W. Amelung, H. Bogen, S. Crewell, B. Dieckrüger, F. Ewert, H.-J. Hendricks Franssen, J. A. Huisman, et al. Monitoring and modeling the terrestrial system from pores to catchments: the transregional collaborative research center on patterns in the soil–vegetation– atmosphere system. *Bulletin of the American Meteorological Society*, 96(10): 1765–1787, 2015. doi: [10.1175/BAMS-D-13-00134.1](https://doi.org/10.1175/BAMS-D-13-00134.1).
- J. Slobodda, A. Hünerbein, R. Lindstrot, R. Preusker, K. Ebell, and J. Fischer. Multichannel analysis of correlation length of seviri images around ground-based cloud observatories to

- determine their representativeness. *Atmospheric Measurement Techniques*, 8(2):567–578, 2015. doi: [10.5194/amt-8-567-2015](https://doi.org/10.5194/amt-8-567-2015).
- S. Steinke, S. Eikenberg, U. Löhnert, G. Dick, D. Klocke, P. Di Girolamo, and S. Crewell. Assessment of small-scale integrated water vapour variability during hope. *Atmospheric Chemistry and Physics*, 15(5):2675–2692, 2015. doi: [10.5194/acp-15-2675-2015](https://doi.org/10.5194/acp-15-2675-2015).
- S. Troemel, M. Diederich, R. Evaristo, A. Ryzhkov, and C. Simmer. Polarimetric signatures indicative of severe storm development—the pentecost event 2014. In *EGU General Assembly Conference Abstracts*, volume 17, page 4818, 2015. URL <https://ams.confex.com/ams/37RADAR/webprogram/Paper275385.html>.
- X. Xie, S. Crewell, U. Löhnert, C. Simmer, and J. Miao. Polarization signatures and brightness temperatures caused by horizontally oriented snow particles at microwave bands: Effects of atmospheric absorption. *Journal of Geophysical Research: Atmospheres*, 120(12):6145–6160, 2015. doi: [10.1002/2015JD023158](https://doi.org/10.1002/2015JD023158).

2014

- H. E. Ahrends, R. Haseneder-Lind, J. H. Schween, S. Crewell, A. Stadler, and U. Rascher. Diurnal dynamics of wheat evapotranspiration derived from ground-based thermal imagery. *Remote sensing*, 6(10):9775–9801, 2014. doi: [10.3390/rs6109775](https://doi.org/10.3390/rs6109775).
- A. Hünerbein, H. Deneke, A. Macke, K. Ebell, and U. Görzdorf. Combining the perspective of satellite- and ground-based observations to analyze cloud frontal systems. *Journal of Applied Meteorology and Climatology*, 53(11):2538–2552, 2014. doi: [10.1175/JAMC-D-13-0274.1](https://doi.org/10.1175/JAMC-D-13-0274.1).
- S. N. Paine, D. D. Turner, and N. Küchler. Understanding thermal drift in liquid nitrogen loads used for radiometric calibration in the field. *Journal of Atmospheric and Oceanic Technology*, 31(3):647–655, 2014. doi: [10.1175/JTECH-D13-00171.1](https://doi.org/10.1175/JTECH-D13-00171.1).
- A. Ryzhkov, M. Diederich, P. Zhang, and C. Simmer. Potential utilization of specific attenuation for rainfall estimation, mitigation of partial beam blockage, and radar networking. *Journal of Atmospheric and Oceanic Technology*, 31(3): 599–619, 2014. doi: [10.1175/JTECH-D-13-00038.1](https://doi.org/10.1175/JTECH-D-13-00038.1).
- J. Schween, A. Hirsikko, U. Löhnert, and S. Crewell. Mixing-layer height retrieval with ceilometer and doppler lidar: from case studies to long-term assessment. *Atmospheric Measurement Techniques*, 7(11):3685–3704, 2014. doi: [10.5194/amt-7-3685-2014](https://doi.org/10.5194/amt-7-3685-2014).
- S. Steinke, U. Löhnert, S. Crewell, and S. Liu. Water vapor tomography with two microwave radiometers. *IEEE Geoscience and Remote Sensing Letters*, 11(2): 419–423, 2014. doi: [10.1109/LGRS.2013.2264354](https://doi.org/10.1109/LGRS.2013.2264354).
- S. Trömel, A. V. Ryzhkov, P. Zhang, and C. Simmer. Investigations of backscatter differential phase in the melting layer. *Journal of Applied Meteorology and Climatology*, 53(10):2344–2359, 2014. doi: [10.1175/JAMC-D-14-0050.1](https://doi.org/10.1175/JAMC-D-14-0050.1).

2013

- K. Ebell, E. Orlandi, A. Hünerbein, U. Löhnert, and S. Crewell. Combining ground-based with satellite-based measurements in the atmospheric state retrieval: Assessment of the information content. *Journal of Geophysical Research: Atmospheres*, 118(13):6940–6956, 2013. doi: [10.1002/jgrd.50548](https://doi.org/10.1002/jgrd.50548).
- S. Trömel, M. R. Kumjian, A. V. Ryzhkov, C. Simmer, and M. Diederich. Backscatter differential phase - estimation and variability. *Journal of Applied Meteorology and Climatology*, 52:2529–2548, 2013. doi: [10.1175/JAMC-D-130124.1](https://doi.org/10.1175/JAMC-D-130124.1).

2012

- M. R. Kumjian. *The impact of precipitation physical processes on the polarimetric radar variables*. PhD thesis, The University of Oklahoma, 2012.
- P. Saavedra, A. Battaglia, and C. Simmer. Partitioning of cloud and rain water content by ground-based observations with the radiometer admira in synergy with a micro rain radar. 2012. doi: [10.1029/2011JD016579](https://doi.org/10.1029/2011JD016579).

2011

- L. Borowska, D. Zrnić, A. Ryzhkov, P. Zhang, and C. Simmer. Polarimetric estimates of a 1-month accumulation of light rain with a 3-cm wavelength radar. *Journal of Hydrometeorology*, 12(5):1024–1039, 2011. doi: [10.1175/2011JHM1339.1](https://doi.org/10.1175/2011JHM1339.1).