

Curriculum Vitae

Natalie Kille

Graduate Student
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Education

- Expected 2018 **Ph.D.** in Atmospheric and Oceanic Sciences
Current GPA: 3.68/ 4.0
Emphasis: Remote sensing of trace gases in the troposphere
Advisor: Prof. Rainer Volkamer
University of Colorado at Boulder
- 2013 - 2015 **M.Sc.** in Atmospheric and Oceanic Sciences (GPA: 3.68/ 4.0)
University of Colorado at Boulder
- 2010 - 2013 **B.Sc.** in Meteorology (Grade 1.7)
Thesis title: "Korrelationen von Spurengasen in der Atmosphäre"
(Correlations of trace gases in the atmosphere)
Advisor: Prof. Dr. Andreas Engel
Johann Wolfgang Goethe University Frankfurt, Germany

Papers in Press, Review and Preparation

- Kille, N.**, S. Baidar, P. Handley, I. Ortega, R. Sinreich, O. R. Cooper, F. Hase, J. W. Hannigan, G. Pfister and R. Volkamer: The CU mobile Solar Occultation Flux instrument: structure functions and emission rates of NH₃, NO₂ and C₂H₆, *Atmos. Meas. Tech.*, doi:10.5194/amt-10-373-2017, 2017.
- Baidar, S., **N. Kille**, I. Ortega, R. Sinreich, D. Thomson, J. W. Hannigan, and R. Volkamer (2016): Development of a digital mobile solar tracker, *Atmos. Meas. Tech.*, 9, 963-972, doi:10.5194/amt-9-963-2016.

Conference Proceedings

- 2017 (talk) **Kille, N.**, R. Chiu, M. Frey, F. Hase, J. Orphal, M. K. Sha, T. Blumenstock, R. Volkamer, Separation of Methane Emissions from Biogenic Sources and Natural Gas Based on CH₄, C₂H₆ and NH₃ Column Observations in the Colorado Front Range, NOAA ESRL GMAC, Boulder, CO, USA, May 2017.
- 2017 (poster) **Kille, N.**, R. Chiu, M. Frey, F. Hase, J. Orphal, M. K. Sha, T. Blumenstock, R. Volkamer, Separation of methane emissions from biogenic sources and natural gas based on CH₄, C₂H₆ and NH₃ column observations in the Colorado Front Range, CIRES Rendezvous, Boulder, CO, USA, May 2017.

- 2017 (talk) R. Volkamer, **N. Kille**, NH₃ and NO_x emissions from CAFO soils, and Structure Functions measured by CU mobile SOF during FRAPPE and ARISTO16, FRAPPE science team meeting, Boulder, CO, USA, May 2017.
- 2017 (poster) **Kille, N.**, R. Chiu, M. Frey, F. Hase, J. Orphal, M. K. Sha, T. Blumenstock, R. Volkamer, Separation of methane emissions from biogenic sources and natural gas based on CH₄, C₂H₆ and NH₃ column observations in the Colorado Front Range, FRAPPE science team meeting, Boulder, CO, USA, May 2017.
- 2016 (poster) **Kille, N.**, S. Baidar, P. Handley, I. Ortega, R. Sinreich, A. Davis, O. Cooper, J. W. Hannigan, G. Pfister, R. Volkamer, The CU Mobile Solar Occultation Flux Instrument: Column Measurements to Quantify Emissions from Agriculture and Biomass Burning, 10th Annual Earth System and Space Science Poster Conference, Boulder, CO, USA, December 2016.
- 2016 (poster) **Kille, N.**, S. Baidar, I. Ortega, R. Sinreich, J. W. Hannigan, O. Cooper, R. Volkamer, The CU Mobile Solar Occultation Flux Instrument: Column Measurements to Quantify Emissions from Biomass Burning, IGAC Science Conference, Breckenridge, CO, USA, September 2016.
- 2016 (poster) **Kille, N.**, S. Baidar, I. Ortega, R. Sinreich, J. W. Hannigan, O. Cooper, E. Nussbaumer, G. Pfister, and R. Volkamer, Mobile column measurements of HCHO, NO₂, NH₃, and C₂H₆ in Colorado during FRAPPE, CIRES Rendezvous, Boulder, CO, USA, May 2016.
- 2015 (talk) **Kille, N.**, S. Baidar, I. Ortega, R. Sinreich, J. W. Hannigan, O. Cooper, E. Nussbaumer, G. Pfister, and R. Volkamer, Mobile column measurements of HCHO, NO₂, NH₃, and C₂H₆ in Colorado during FRAPPE, AGU fall meeting, San Francisco, CA, USA, December 2015.
- 2015 (poster) Ortega, I., **N. Kille**, S. Baidar, R. Sinreich, J. W. Hannigan, F. Hase, and R. Volkamer, Evaluation of a Remote Sensing Instrument Suite to Measure Gas Columns from a Mobile Laboratory, AGU fall meeting, San Francisco, CA, USA, December 2015.
- 2015 (poster) Volkamer, R., R. Chiu, T. Blumenstock, F. Hase, J. W. Hannigan, **N. Kille**, M. Frey, M. K. Sha, J. Orphal, Separating methane emissions from biogenic sources and natural gas by vertical column enhancements of ammonia, ethane, and methane in the Colorado Front Range, AGU fall meeting, San Francisco, CA, USA, December 2015.
- 2015 (poster) **Kille, N.**, E. M. Waxman, T. Kurten, J. Elm, P. J. Ziemann, and R. Volkamer, Setschenow Salting Constants of IEPOX, 2-methyltetrol, Glyoxal, and Methylglyoxal in Inorganic Salts and Oxalate, IAMA, Davis, CA, USA, December 2015.
- 2015 (poster) **Kille, N.**, S. Baidar, I. Ortega, R. Sinreich, J. W. Hannigan, and R. Volkamer, Mobile column measurements of HCHO, NO₂, NH₃, and C₂H₆ in Colorado during FRAPPE, FRAPPE science team meeting, Boulder, CO, USA, May 2015.

Honors and Awards

2016 - 2017	CIRES Graduate Student Research Award
2016	Travel award, International Global Atmospheric Chemistry (IGAC) Project 2016 Science Conference, Breckenridge, CO, USA
2016	Travel award, Coordinated Investigation of Cloud Chemistry workshop, Wilmington, NY, USA
2015	Travel award, JPL Climate Summer School: 'Using Satellite Observations to Advance Climate Models', Pasadena, CA, USA
2013 - 2014	Fulbright Scholar, University of Colorado at Boulder

Teaching Positions and Practical Experiences

Spring 2016	Lab Instructor for 'Weather and the Atmosphere Lab' <i>University of Colorado at Boulder</i>
Fall 2015	Lab Instructor for 'Analytical Chemistry' <i>University of Colorado at Boulder</i>
Spring 2015	Teaching assistant for 'Introduction to Meteorology' <i>University of Colorado at Boulder</i>
Fall 2013, Spring 2014	Teaching assistant for 'Weather and the Atmosphere' <i>University of Colorado at Boulder</i>
Fall 2012, Spring 2013	Teaching assistant for 'Atmospheric Dynamics' <i>University of Colorado at Boulder</i>
2011 - 2013	Students representative on the board of examiners <i>University of Frankfurt, Germany</i>

Professional Affiliations

2015 - Present	American Geophysical Union (AGU)
2012 - Present	Deutsche Meteorologische Gesellschaft (DMG) (German Meteorological Society)

Graduate Coursework

Atmospheric Chemistry	Atmospheric Observations
Clouds and Aerosols	Physical Oceanography
Atmospheric Dynamics	Biogeochemical Oceanography
Weather Forecasting	Radiative Transfer/ Remote Sensing
Statistical Methods	Advanced Radiative Transfer

Skills

Languages	German (native), English (fluent), French (good), Norwegian (basics)
Computer skills	Fortran, IDL, Java, Matlab, Maple, R, Latex