

## Eric A. Kort

Space Research Building, room 2553  
2455 Hayward St.  
Ann Arbor, MI 48109

eakort@umich.edu  
Tel.: (734) 763-8414  
<https://kort.engin.umich.edu/>

### RESEARCH APPOINTMENTS

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<b>Professor</b>	2024-present
Associate Chair for Graduate Studies (2022-) Climate and Space Sciences and Engineering, Applied Physics University of Michigan, Ann Arbor, MI	
<b>Associate Professor</b>	2019-2024
Climate and Space Sciences and Engineering, Applied Physics University of Michigan, Ann Arbor, MI	
<b>Assistant Professor</b>	2013-2019
Climate and Space Sciences and Engineering, Applied Physics University of Michigan, Ann Arbor, MI	
<b>W. M. Keck Institute for Space Studies Postdoctoral Fellow</b>	2011-2013
Jet Propulsion Laboratory, California Institute of Technology, Pasadena, CA	

### EDUCATION

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<b>Ph.D., Applied Physics</b> , Harvard University, Cambridge, MA	2011
<b>S.M., Applied Physics</b> , Harvard University, Cambridge, MA	2005
<b>B.A., Physics</b> (with Honors), minor Mathematics, Pomona College, Claremont, CA	2004

### RECOGNITIONS

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NCAR Affiliate Scientist	2022-2025
UM CLASP Department Faculty Award	2023
NASA Group Achievement Award (OCO-2 Science Team)	2018
NSF CAREER award	2017
NASA New Investigator Program (NIP) in Earth Science award	2014
Early Career Award, Gordon Conference for Atmospheric Chemistry, Atmospheric Chemistry Colloquium for Emerging Senior Scientists (ACCESS)	2013
W. M. Keck Institute for Space Studies Postdoctoral Fellowship	2011-2013
National Center for Atmospheric Research Advanced Study Program Postdoctoral Fellowship (Declined)	2011
Outstanding Student Paper Award, Fall Meeting, AGU	2010
National Defense Science and Engineering Graduate (NDSEG) Fellowship	2007-2010
Edmunds Physics Prize, Pomona College	2004
Tileston Physics Prize, Pomona College	2003

### AIRBORNE CAMPAIGNS

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(\* instrument PI and/or mission scientist, \*\* overall project PI)

\*\*Flaring & Fossil Fuels: Uncovering Emissions and Losses (F<sup>3</sup>UEL), Gulf of Mexico/TX, Summer 2020; North Dakota/Alaska/California, Summer 2021; Gulf of Mexico, Spring 2022, Fall 2022

- \*\*MAIZE: Measurement of Agriculture Investigating farm-Zone Emissions of N<sub>2</sub>O, Iowa/Nebraska, Spring 2021; Spring 2022
- \*\*AVIRIS-NG COVID: Directly observing changes in California Methane Emissions due to Covid-19, California, Summer 2020
- \*\* RAPID: Time-critical airborne measurements to quantify ozone impacts of emissions changes during the Covid-19 pandemic response in the U.S., Houston & Denver, Summer 2020
- East-Coast Outflow Greenhouse Gas study, Covid response (ECO-Covid), East Coast US, Spring 2020
- \* East-Coast Outflow Greenhouse Gas study (ECO-GHG), East Coast US, Spring 2018
- Offshore oil & gas emissions assessment, Gulf of Mexico, Winter 2018
- \* Greenhouse Emissions in the Midwest (GEM), Minnesota, Summer 2017; GEM-2, Winter 2018; GEM-3, Spring 2018
- \*\* Fertilizer Emissions Airborne Study (FEAST), Colorado & Mississippi River Valley, Spring 2017
- \* The O<sub>2</sub>/N<sub>2</sub> Ratio and CO<sub>2</sub> Airborne Southern Ocean Study (ORCAS), Chile, Winter 2016
- \*\* Twin Otter Project Defining Oil/gas Well emissioNs (TOPDOWN), New Mexico\*\* & Pennsylvania\*, Spring 2015
- \* TOPDOWN, North Dakota, Colorado, Spring 2014
- \* Barnett methane emissions study (Environmental Defense Fund), Denton, TX, Fall 2013
- HIAPER Pole to Pole Observations (HIPPO-5), Pole to Pole, Summer-Fall 2011; HIPPO-4, Pole to Pole, Spring-Summer 2011
- California Nexus, Research at the Nexus of Air Quality and Climate Change (CALNEX), Ontario, CA, Spring 2010
- HIPPO-2, Pole to Pole, Fall 2009; HIPPO-3, Pole to Pole, Spring 2010;
- HIPPO-1, Pole to Pole, Winter 2009
- Stratosphere-Troposphere Analyses of Regional Transport (START08), Broomfield, CO, Spring 2008

## TEACHING

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- Earth System Evolution (AOSS 320, CLIMATE 320), University of Michigan, Fall 2014- 2016, 2018, 2021-2023
- Atmospheric Chemistry (CLIMATE 479), University of Michigan, Winter 2021, Winter 2023, Fall 2024
- Climate and the Media (CLIMATE/EARTH 140), University of Michigan, Winter 2022, 2024
- Earth System Interactions (AOSS 475), University of Michigan, Winter 2014-2019
- AOSS Seminar (AOSS 749), University of Michigan, Fall 2014 & Winter 2015

## SERVICE ACTIVITIES

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- Scientific Advisory Board, Member, European Integrated Carbon Observing System (ICOS) (2023-)
- Committee on Earth Science and Applications from Space (CESAS), Member, National Academies of Sciences, Engineering, and Medicine (2023-)
- Chair of Scientific Advisory Committee, Carbon Mapper, Inc. (2021-)
- Permian Methane Analysis Project, Environmental Defense Fund, Scientific Advisory Panel (2019-2022)
- Topic Chair, International Bureau of Weights and Measures/World Meteorology Organization Metrology for Climate Action workshop, 2022
- Science and Technology in Society forum, Japan, 2022
- National Academies of Sciences, Engineering, and Medicine (NASEM) Committee member on the *Future Use of NASA Airborne Platforms to Advance Earth Science Priorities*, (2020-2021)
- European Commission Joint Research Centre workshop participant and report co-author “Atmospheric monitoring and inverse modeling for verification of GHG inventories” (2017-2018)

Japanese National Institute for Environmental Studies (NIES), workshop participant and report co-author  
 “A guidebook on the use of satellite greenhouse gases observation data for verification of greenhouse gases emission inventories” (2017-2018)  
 Co-lead for Workshop Towards Addressing Major Gaps in the Global Methane Budget, Linde Center, Caltech (2017)  
 World Meteorological Organization Integrated Global GHG Information System (IG<sup>3</sup>IS) planning & implementation team (2016-2020)  
 Co-chair of NACP breakout session on “Quantification and attribution of anthropogenic methane emissions in North America” (2015)  
 Co-organizer Workshop on Measurements in Oil and Gas Production Regions, NOAA ESRL (2015)  
 Public forum on Four Corners methane, Farmington, New Mexico (2015)  
 JPL Carbon Cycle & Ecosystems Initiative steering committee member (2013)  
 American Geophysical Union member

*University of Michigan service:*

Associate Chair for Graduate Studies, CLaSP Department (2022-)  
 Co-lead UM ClaSP department AGU Bridge program (2022-)  
 Co-creator/director of Climate Change Solutions graduate certificate program (2020-)  
 Michigan Engineering ONRAMP Faculty Advisory Board (2021-)  
 Reviewer for Rackham Merit Fellowship (2022-2023)  
 Launch Committee for Dr. Jim Raines (2022-2023)  
 College of Engineering Energy Institute visioning committee (2021-2022)  
 Climate and Space Sciences and Engineering graduate admissions chair (2021-2022); graduate committee (2020-2022); curriculum committee (2020-2022); research excellence committee (2019-2020); mentoring committee (2018-2020); executive committee (2016-2020); graduate admission committee (2015-2019)  
 President’s Commission on Carbon Neutrality: Carbon Accounting Sub Group (2019)  
 Faculty transition team for new School of Sustainability at University of Michigan (2016-2017)  
 Michigan Geophysical Union judge (2014, 2015)  
 University of Michigan College of Engineering Graduate Symposium conference judge (2015)  
 Atmospheric, Oceanic and Space Sciences Seminar co-organizer (2014-2015)  
 President Schlissel’s committee on Greenhouse Gas Reduction, University of Michigan (2014-2015)  
 UM Integrated Assessment on Hydraulic Fracturing in Michigan (consulting member; 2014-2015)  
 Qualifying and prospectus exams: Anna Savage (2014, Applied Physics), Ben Isaacoff (2014, Applied Physics), Jamie MacLennan (2014, Applied Physics), Rebecca Craig (2014, Chemistry), Liz Ultee (2015, AOSS), Judit Szente (2015, AOSS), Zach Butterfield (2015, CLaSP), Rahul Gogna (2016, Applied Physics), Samantha Basile (2016/2017, CLaSP), Anthony Torres (2016/2017, CLaSP), Shane Coffing (2017, Applied Physics), Dien Wu (2017, U. of Utah), Brian Swiger (2018, CLaSP), Yifan Guan (2020, CLaSP), Yingxiao Zhang (2021, CLaSP), Erica Whiting (2023, CLaSP), Maya Fields (2023, CLaSP), Maria Salazar (2024, CLaSP).  
 PhD committees: Chunpeng Wang (2014, AOSS), Anna Savage (2017, Applied Physics), Rebecca Craig (2018, Chemistry), Matthew Wozniak (2019, CLaSP), Dien Wu (2020, Utah), Zachary Butterfield (2020, CLaSP), Morgan Loechli (2023, CLaSP), Yifan Guan (2023, CLaSP), Katlyn Mackay (2023, Memorial University, Newfoundland), Anthony Torres (2023, CLaSP).  
 PhD committees chaired/co-chaired: John Ware (2018, Physics), Alexander (Sandro) Gvakharia (2019, Applied Physics), Emily Yang (2022, CLaSP), Alan Gorchoy Negron (2023, CLaSP), Daniel Huber (2023, CLaSP), Natasha Dacic (2024, CLaSP).

*Review tasks:*

Peer reviewer for *Nature*, *PNAS*, *Nature Geoscience*, *Geophysical Research Letters*, *Nature Scientific Reports*, *Atmospheric Chemistry and Physics*, *Journal of Geophysical Research*, *Global Biogeochemical Cycles*, *Environmental Pollution*, *Atmospheric Measurement Techniques*, and *Environmental Science and Technology*

Proposal & panelist reviewer (*NASA*, *NSF*, *NERC*, *NSERC*, *Belmont Forum*, *Netherlands Space Office*, *Swedish National Space Board*) & panelist for *NASA* (2013, 2014 [2], 2016, 2019)

## INVITED SEMINARS

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Schlumberger-Doll Research, Sustainability and Emissions (2023); NASA Jet Propulsion Laboratory, Carbon Cycle seminar (2022); Andrews University, Chemistry & Biochemistry (2019); Max Planck Institute for Biogeochemistry, Jena, Germany (2017); University of California- Berkeley, Berkeley Atmospheric Sciences Center Seminar (2017); University of Colorado- Boulder, Atmospheric and Oceanic Sciences (2017); California Institute of Technology, Environmental Science and Engineering (2017); University of Washington, Atmospheric Science (2017); University of Toronto, Center for Global Change Science Distinguished Lecturer Series (2017); Dartmouth College (2017); NASA GMAO, Goddard Space Flight Center (2015); NOAA ESRL Chemical Science Division (2014); University of Michigan, Atmospheric, Oceanic and Space Sciences (2014); UiT The Arctic University of Norway, (CAGE) Centre for Arctic Gas Hydrate, Environment, and Climate (2013); Boston University, Terrestrial Biogeochemistry (2013); Massachusetts Institute of Technology, Civil & Environmental Engineering (2013); University of Michigan, Atmospheric, Oceanic and Space Sciences (2013); Jet Propulsion Laboratory (2013); Pomona College, Physics (2012); UC Irvine, Earth System Science (2012); UCLA, Atmospheric and Oceanic Sciences (2012); Caltech, ESE & Society discussion group (2012); Caltech, Yuk Lunch seminar (2011); Jet Propulsion Laboratory (2011); JAMSTEC, Yokohama, Japan (2010)

## BOOK CHAPTERS AND REPORTS

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McDonald BC, He J, Harkins C, de Gouw J, Elguindi N, Duren R, Gilman J, Kort EA, Miller CE, Peischl J, Petron G, Thompson C, *A Review of U.S. Oil and Gas Methane and Air Pollutant Emissions*, Air and Waste Management Environmental Manager Magazine, 2023.

Kort EA, McKain K, Chapter 13 - Aircraft vertical profile measurements for evaluation of satellite retrievals of long-lived trace gases, chapter in *Field Measurements for Passive Environmental Remote Sensing*, Elsevier, 235-244, <https://doi.org/10.1016/B978-0-12-823953-7.00020-4>, 2023.

Report co-author: National Academies of Sciences, Engineering, and Medicine. *Airborne Platforms to Advance NASA Earth System Science Priorities: Assessing the Future Need for a Large Aircraft*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/26079>, 2021.

Report co-author: *Atmospheric monitoring and inverse modelling for verification of greenhouse gas inventories*, EUR 29276 EN, Publications Office of the European Union, Luxembourg, ISBN 978-92-79-88938-7 (online), 978-92-79-88939-4 (print), doi:10.2760/759928 (online), 10.2760/02681 (print), JRC111789, 2018.

Chapter 4 lead author, Matsunaga T. and Maksyutov S. (eds.) *A Guidebook on the Use of Satellite Greenhouse Gases Observation Data to Evaluate and Improve Greenhouse Gas Emission Inventories*, Satellite Observation Center, National Institute for Environmental Studies, Japan, 129 pp. 2018.

## PUBLICATIONS

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As of Aug 2024: Google Scholar h-index = 57, total citations = 11,826  
(indicates Kort group member)

112. Wilmot TY, Lin JC, Wu D, Oda T, Kort EA, *Toward a satellite-based monitoring system for urban CO<sub>2</sub> emissions in support of global collective climate mitigation actions*, Environmental Research Letters, <https://doi.org/10.1088/1748-9326/ad6017>, 2024.
111. Pu T, Gerlein-Safdi C, Xiong Y, Li M, Kort EA, Bloom AA, *Berkeley-RWAWC: A New CYGNSS-Based Watermask Unveils Unique Observations of Seasonal Dynamics in the Tropics*, Water Resources Research, <https://doi.org/10.1029/2024WR037060>, 2024.
110. Huber D, Kort EA, AL Steiner, *Soil Moisture, Soil NO<sub>x</sub> and Regional Air Quality in the Agricultural Central United States*, J. Geophys. Res. Atmospheres, <https://doi.org/10.1029/2024JD041015>, 2024.
109. Oldfield EE, Lavallee JM, Blesh J, Bradford MA, Cameron-Harp M, Cotrufo MF, Eagle AJ, Eash L, Even RG, Kuebbing S, Kort EA, Lark TJ, Latka C, Lin Y, Machmuller MB, O'Neill B Raffeld AM, RoyChowdhury T, Rudek J, Sanderman J, Sprunger CD, Toombs TP, Aragon NU, Vidal M, Woolf D, Zelikova TJ, Gordon DR, *Greenhouse gas mitigation on croplands: clarifying the debate on knowns, unknowns and risks to move forward with effective management interventions*, Carbon Management, 15, 1, 2365896, <https://doi.org/10.1080/17583004.2024.2365896>, 2024.
108. Gorchov Negron AM, Kort EA, Plant G, Brandt AR, Chen Y, Hausman C, Smith ML, *Measurement-based carbon intensity of US offshore oil and gas production*, Environmental Research Letters, <https://doi.org/10.1088/1748-9326/ad489d>, 2024.
107. Biener KJ, Gorchov Negron AM, Kort EA, Ayasse AK, Chen Y, MacLean JP, McKeever J, *Temporal Variation and Persistence of Methane Emissions from Shallow Water Oil and Gas Production in the Gulf of Mexico*, Environ. Sci. Technol., <https://doi.org/10.1021/acs.est.3c08066>, 2024.
106. Li M, Kort EA, Bloom AA, Wu D, Plant G, Gerlein-Safdi C, Pu T, *Underestimated Dry Season Methane Emissions from Wetlands in the Pantanal*, Environ. Sci. Technol., <https://doi.org/10.1021/acs.est.3c09250>, 2024.
105. Jin Y, Keeling RF, Stephens BB, Long MC, Patra PK, Rodenbeck C, Morgan EJ, Kort EA, Sweeney C, *Improved Atmospheric Constraints on Southern Ocean CO<sub>2</sub> Exchange*, Proceedings of the National Academy of Science, <https://doi.org/10.1073/pnas.2309333121>, 2024.
104. Plant G, Kort EA, Gorchov Negron AM, Chen Y, Fordice G, Harkins C, *In situ sampling of NO<sub>x</sub> emissions from United States natural gas flares reveals heavy-tail emission characteristic*, Environ. Sci. Technol., <https://doi.org/10.1021/acs.est.3c08095>, 2024.
103. Pühl M, Roiger A, Fiehn A, Gorchov Negron AM, Kort EA, Schwietzke S, Pisso I, Foulds A, Lee J, France JL, Jones AE, Lowry D, Fisher RE, Huang L, Shaw J, Bateson P, Andrews S, Young S, Dominutti P, Lachlan-Cope T, Weiss A, Allen G, *Aircraft-based mass balance estimate of methane emissions from offshore gas facilities in the southern North Sea*, Atmos. Chem. Phys., 24, 1005–1024, <https://doi.org/10.5194/acp-24-1005-2024>, 2024.
102. Roten D, Lin JC, Das S, Kort EA, *Constraining Sector-specific CO<sub>2</sub> Fluxes using Space-based XCO<sub>2</sub> Observations over the Los Angeles Basin*, Geophysical Research Letters, <https://doi.org/10.1029/2023GL104376>, 2023.
101. Gorchov Negron AM, Kort EA, Chen Y, Brandt AR, Smith ML, Plant G, Ayasse AK, Schwietzke S, Zavala-Araiza D, Hausman C, Adames-Corraliza AF, *Excess methane emissions from shallow water platforms elevate the carbon intensity of US Gulf of Mexico oil and gas production*, Proceedings of the National Academy of Science, <https://doi.org/10.1073/pnas.2215275120>, 2023.

100. Huber DE, Steiner AL, Kort EA, *Sensitivity of Modeled Soil NO<sub>x</sub> Emissions to Soil Moisture*, J. Geophys. Res. Atmospheres, <https://doi.org/10.1029/2022JD037611>, 2023.
99. Krysztofiak G, Catoire V, Dudok de Wit T, Kinnison DE, Ravishankara AR, Brocchi V, Atlas E, Bozem H, Commane R, D'Amato F, Daube B, Diskin GS, Engel A, Friedl-Vallon F, Hintsä E, Hurst DF, Hoor P, Jegou F, Jucks KW, Kleinbohl A, Kullmann H, Kort EA, McKain K, Moore FL, Obersteiner F, Gonzalez Ramos Y, Schuck T, Toon GC, Viciani S, Wetzell G, Williams J, Wofsy SC, *N<sub>2</sub>O temporal variability from the middle troposphere to the middle stratosphere based on airborne and balloon-borne observations during the period 1987-2018*, Atmosphere, <https://doi.org/10.3390/atmos14030585>, 2023.
98. Lal R, Kort EA, *Observing system choice can minimize interference of the biosphere in studies of urban CO<sub>2</sub> emissions*, J. Geophys. Res. Atmospheres, <https://doi.org/10.1029/2022JD037452>, 2023.
97. Sherwin ED, Rutherford JS, Chen Y, Aminfard S, Kort EA, Jackson RB, Brandt AR, *Single-blind validation of space-based point-source detection and quantification of onshore methane emissions*, Scientific Reports **13**, 3836, <https://doi.org/10.1038/s41598-023-30761-2>, 2023.
96. Yang EG, Kort EA, Ott LE, Oda T, Lin JC, *Using Space-Based CO<sub>2</sub> and NO<sub>2</sub> Observations to Estimate Urban CO<sub>2</sub> Emissions*, J. Geophys. Res. Atmospheres, <https://doi.org/10.1029/2022JD037736>, 2023.
95. Thorpe AK, Kort EA, Cusworth DH, Ayasse AK, Bue BD, Yadav V, Thompson D, Frankenberg C, Herner J, Falk M, Lozo CJ, Langfitt Q, Wilhelm SF, Eggers R, Green RO, Miller CE, Duren RM, *Methane emissions decline from reduced oil, natural gas, and refinery production during COVID-19*, Environmental Research Communications, <https://doi.org/10.1088/2515-7620/acb5e5>, 2023.
94. Plant G, Kort EA, Brandt A, Chen Y, Fordice G, Gorchov Negrón AM, Schwietzke S, Smith M, Zavala-Araiza D, *Inefficient and unlit natural gas flares both emit large quantities of methane*, Science, <https://doi.org/10.1126/science.abq0385>, 2022.
93. Meyer AG, Lindenmaier R, Heerah S, Benedict KB, Kort EA, Peischl J, Dubey M, *Using Multiscale Ethane/Methane Observations to Attribute Coal Mine Vent Emissions in the San Juan Basin from 2013–2021*, J. Geophys. Res. Atmospheres, doi: <http://dx.doi.org/10.1029/2022JD037092>, 2022.
92. Ayasse AK, Thorpe AK, Cusworth DH, Kort EA, Gorchov Negrón AM, Heckler J, Asner G, Duren RM, *Methane remote sensing and emission quantification of offshore shallow water oil and gas platforms in the Gulf of Mexico*, Environ. Res. Lett. **17** 084039, doi: <https://doi.org/10.1088/1748-9326/ac8566>, 2022.
91. Chen Y, Sherwin ED, Berman ESF, Jones BB, Gordon MP, Wetherley EB, Kort EA, Brandt AR, *Quantifying Regional Methane Emissions in the New Mexico Permian Basin with a Comprehensive Aerial Survey*, Environ. Sci. Technol., <https://doi.org/10.1021/acs.est.1c06458>, 2022.
90. Hegarty JD, Cady-Pereira KE, Payne VH, Kulawik SS, Worden JR, Kantchev V, Worden HM, McKain K, Pittman JV, Commane R, Daube BC, Kort EA, *Validation and error estimation of AIRS MUSES CO Profiles with HIPPO, ATom and NOAA GML aircraft observations*, Atmos. Meas. Tech., **15**, 205-223, <https://doi.org/10.5194/amt-15-205-2022>, 2022.
89. Patra PK, Dlugokencky EJ, Elkins JW, Dutton GS, Tohjima Y, Sasakawa M, Ito A, Weiss RF, Manizza M, Krummel PB, Prinn RG, O'Doherty S, Bianchi D, Nevison C, Solazzo E, Lee H, Joo S, Kort EA, Maity S, Masayuki T, *Forward and inverse modelling of atmospheric nitrous oxide*

- using *MIROC4-atmospheric chemistry-transport model*, Journal of the Meteorological Society of Japan, doi:10.2151/jmsj.2022-018, 2022.
88. Plant G, Kort EA, Murray LT, Maasackers JD, Aben I, *Evaluating urban methane emissions from space using TROPOMI methane and carbon monoxide observations*, Remote Sensing of Environment, 268, 112756, <https://doi.org/10.1016/j.rse.2021.112756>, 2022.
87. Long MC, Stephens BB, McKain K, Sweeney C, Keeling RF, Kort EA, Morgan EJ, Bent JD, Chandra N, Chevallier F, Commane R, Daube BC, Krummel PB, Loh Z, Luijkx IT, Munro D, Patra P, Peters W, Ramonet M, Rodenbeck C, Stavert A, Tans P, Wofsy SC, *Strong Southern Ocean carbon uptake evident in airborne observations*, Science, 374, 1275-1280, doi: 10.1126/science.abi4355, 2021.
86. Gerlein-Safdi C, Bloom AA, Plant G, Kort EA, Ruf CS, *Improving Representation of Tropical Wetland Methane Emissions with CYGNSS Inundation Maps*, Global Biogeochemical Cycles, 35, e2020GB006890, <https://doi.org/10.1029/2020GB006890>, 2021.
85. Laughner JL, Neu JL, Schimel D, Wennberg PO, Barsanti K, Bowman KW, Chatterjee A, Croes BE, Fitzmaurice HL, Henze DK, Kim J, Kort EA, Liu Z, Miyazaki K, Turner AJ, Anenberg S, Avise J, Cao H, Crisp D, de Gouw J, Eldering A, Fyfe JC, Goldberg DL, Gurney KR, Hasheminassab S, Hopkins F, Ivey CE, Jones DBA, Lovenduski NS, Martin RV, McKinley GA, Ott L, Poulter B, Ru M, Sander SP, Swart N, Yung YL, Zeng ZC, KISS team, *Societal shifts due to COVID-19 reveal large-scale complexities and feedbacks between atmospheric chemistry and climate change*, Proceedings of the National Academy of Sciences, 118, 46, <https://doi.org/10.1073/pnas.2109481118>, 2021.
84. Hintsä E, Moore FL, Hurst DF, Dutton GS, Hall BD, Nance JD, Miller BR, Montzka SA, Wolton LP, McClure-Begley A, Elkins JW, Hall EG, Jordan AF, Rollins AW, Thornberry TD, Watts LA, Thompson CR, Peischl J, Bourgeois I, Ryerson TB, Daube BC, Pittman JV, Wofsy SC, Kort EA, Diskin GS, Bui TP, *UAS Chromatograph for Atmospheric Trace Species (UCATS) – a versatile instrument for trace gas measurements on airborne platforms*, Atmos. Meas. Tech., 14, 6795-6819, <https://doi.org/10.5194/amt-14-6795-2021>, 2021.
83. Gonzalez A, Millet DB, Yu X, Wells KC, Griffis TJ, Baier BC, Campbell PC, Choi Y, DiGangi JP, Gvakharia A, Halliday H, Kort EA, McKain K, Nowak J, Plant G, *Fossil Versus Nonfossil CO Sources in the US: New Airborne Constraints from ACT-America and GEM*, Geophysical Research Letters, <https://doi.org/10.1029/2021GL093361>, 2021.
82. Lyon DR, Hmiel B, Gautam R, Omara M, Roberts K, Barkley Z, Davis KJ, Miles N, Monteiro V, Richardson S, Conley S, Smith M, Jacob DJ, Shen L, Varon DJ, Deng A, Rudelis X, Sharma N, Story K, Brandt A, Kang M, Kort EA, Marchese A, Hamburg SP, *Concurrent variation in oil and gas methane emissions and oil price during the COVID-19 pandemic*, Atmos. Chem. Phys., <https://doi.org/10.5194/acp-21-6605-2021>, 2021.
81. Wu D, Lin JC, Duarte HF, Yadav V, Parazoo NC, Oda T, Kort EA, *A model for urban biogenic CO<sub>2</sub> Fluxes: Solar-Induced Fluorescence for Modeling Urban biogenic Fluxes (SMUrF v1)*, Geosci. Model Dev., <https://doi.org/10.5194/gmd-14-3633-2021>, 2021.
80. Zavala-Araiza D, Omara M, Gautam R, Smith ML, Pandey S, Aben I, Almanza-Veloz V, Conley S, Houweling S, Kort EA, Maasackers JD, Molina LT, Pusuluri A, Scarpelli T, Schwietzke S, Shen L, Zavala M, Hamburg SP, *A tale of two regions: methane emissions from oil and gas production in offshore/onshore Mexico*, Environ. Res. Lett. 16 024019, <https://doi.org/10.1088/1748-9326/abceeb>, 2021.

79. Yu X, Millet DB, Wells KC, Henze DK, Cao H, Griffis TJ, Kort EA, Plant G, Deventer MJ, Kolka RK, Roman DT, Davis KJ, Desai A, Baier BC, McKain K, Czarnetzki AC, Bloom AA, *Aircraft-based inversions quantify the importance of wetlands and livestock for Upper Midwest methane emissions*, *Atmos. Chem. Phys.*, <https://doi.org/10.5194/acp-21-951-2021>, 2021.
78. Huber DE, Steiner AL, Kort EA, *Daily Cropland Soil NO<sub>x</sub> Emissions Identified by TROPOMI and SMAP*, *Geophysical Research Letters*, doi: 10.1029/2020GL089949, 2020.
77. Gvakharia A, Kort EA, Smith ML, Conley S, *Evaluating Cropland N<sub>2</sub>O Emissions and Fertilizer Plant Greenhouse Gas Emissions With Airborne Observations*, *J. Geophys. Res. Atmospheres*, doi: 10.1029/2020JD032815, 2020.
76. Gorchov Negron AM, Kort EA, Conley SA, Smith ML, *Airborne Assessment of Methane Emissions from Offshore Platforms in the U.S. Gulf of Mexico*, *Environ. Sci. Technol.*, doi: 10.1021/acs.est.0c00179, 2020.
75. Yang EG, Kort EA, Wu D, Lin JC, Oda T, Ye X, Lauvaux T, *Using space-based observations and Lagrangian modeling to evaluate urban carbon dioxide emissions in the Middle East*, *J. Geophys. Res. Atmospheres*, doi: 10.1029/2019JD031922, 2020.
74. Ye X, Lauvaux T, Kort EA, Oda T, Feng S, Lin JC, Yang EG, Wu D, *Constraining fossil fuel CO<sub>2</sub> emissions from urban area using OCO-2 observations of total column CO<sub>2</sub>*, *J. Geophys. Res. Atmospheres*, doi: 10.1029/2019JD030528, 2020.
73. Wu D, Lin JC, Oda T, Kort EA, *Space-based quantification of per capita CO<sub>2</sub> emissions from cities*, *Environ. Res. Lett.* 15 035004, <https://doi.org/10.1088/1748-9326/ab68eb>, 2020.
72. Yu X, Millet DB, Wells KC, Griffis TJ, Chen X, Baker JM, Conley SA, Smith ML, Gvakharia A, Kort EA, Plant G, Wood JD, *Top-down constraints on methane point source emissions from animal agriculture and waste based on new airborne measurements in the US Upper Midwest*, *J. Geophys. Res. Biogeosciences*, doi: 10.1029/2019JG005429, 2020.
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Kort EA, Negron AMG, Plant G, Biener KJ, Chen Y, Brandt AR, Smith M, Zavala-Araiza D, Adames-Corraliza A, Schwietzke S, *Emissions of Greenhouse Gases and Pollutants from Natural Gas Flares and Offshore Oil and Gas Platforms: Results from the F<sup>3</sup>UEL Project*, AGU Fall Meeting, San Francisco, 2023.

Xiong Y, Kort EA, Bloom AA, Gerlein-Safdi C, Pu T, *Interannual and Seasonal Variability of Methane Emissions from Tropical Wetlands Derived from Four Years of CYGNSS Observations*, AGU Fall Meeting, San Francisco, 2023.

Whiting E, Plant G, Kort EA, Aben I, Leguijt G, Maasackers J, *Evaluating Methane Emissions of C40 Cities from Space*, AGU Fall Meeting, San Francisco, 2023.

Roten D, Wilmot T, Lin JC, Das S, Kort EA, Chatterjee A, *How Well do OCO-2 and OCO-3 Monitor the United States? Implications for Current and Future Space-based Carbon-observing Systems*, AGU Fall Meeting, San Francisco, 2023.

Plant G, Kort EA, Negron AMG, Fordice G, Brandt AR, Chen Y, Smith M, *NO<sub>x</sub> from US flares exhibits a skewed emissions distribution*, AGU Fall Meeting, San Francisco, 2023.

Huber DE, Steiner A, Kort EA, *Agricultural Soil NO<sub>x</sub> and its Contribution to Primary and Secondary Pollutant Formation*, AGU Fall Meeting, San Francisco, 2023.

Gerlein-Safdi C, Pu T, Xiong Y, Kort EA, Bloom AA, *Beneath the sea of clouds: a new CYGNSS-based monthly watermask product uncovers the hidden seasonality of tropical waterbodies*, AGU Fall Meeting, San Francisco, 2023.

Burton N, Kort EA, Pettersen C, *Marine Cloud Brightening from Offshore Oil and Gas Platform Emissions in the Southern Gulf of Mexico*, AGU Fall Meeting, San Francisco, 2023.

Biener KJ, Negron AG, Kort EA, Chen Y, Ayasse A, Brandt AR, MacLean JP, McKeever J, *Persistence and Temporal Variation of Methane Emissions from Shallow Water Oil and Gas Production in the Gulf of Mexico, from 2018 to 2022*, AGU Fall Meeting, San Francisco, 2023.

Moss Z, Kort EA, Stephens B, *Investigating the Cause of Unexpected CO<sub>2</sub> signals Seen from Ship-Based Measurements in the Southern Ocean*, 103<sup>rd</sup> AMS Annual Meeting, 2023.

Gorchov Negron AM, Kort EA, Chen Y, Brandt AR, Smith M, Plant G, Ayasse A, Schwietzke S, Zavala-Araiza D, Hausman C, Adames-Corraliza A, *Observations show that methane emissions elevate the carbon intensity of oil and gas production in the US Gulf of Mexico*, AGU Fall Meeting, Chicago, 2022.

Huber DE, Steiner AL, Kort EA, *Evaluating the Impact of Soil Moisture on Agricultural Soil NO<sub>x</sub> Emissions and Air Quality*, AGU Fall Meeting, Chicago, 2022.

Whiting E, Plant G, Kort EA, *Estimating Urban Methane Emissions from Space using TROPOMI CH<sub>4</sub>:CO Enhancement Ratios*, AGU Fall Meeting, Chicago, 2022.

Li M, Kort EA, Bloom AA, Wu D, Plant G, Gerlein-Safdi C, Pu T, *Using Atmospheric Observations to Improve the Representation of Wetland Methane Emissions in the Pantanal*, AGU Fall Meeting, Chicago, 2022.

Wu D, Liu J, Wennberg P, Laughner J, Palmer PI, Nelson RR, Lin JC, Kort EA, Eldering A, *Informing intra-city emission characteristics using satellite observations of CO<sub>2</sub> and co-emitted species*, AGU Fall Meeting, Chicago, 2022.

- Wilmot T, Lin JC, Wu D, Roten D, Oda T, Kort EA, *Urban CO<sub>2</sub> Emissions from Cities around the World and their Scaling Relationships with Socioeconomic Variables, determined with Orbiting Carbon Observatory -2*, AGU Fall Meeting, Chicago, 2022.
- Roten D, Lin JC, Kort EA, *Detecting Changes in Sector-specific CO<sub>2</sub> Emissions from Space: an Application of OCO-3 over the Los Angeles Basin*, AGU Fall Meeting, Chicago, 2022.
- Ayasse A, Thorpe AK, Cusworth D, Kort EA, Gorchov Negron AM, Heckler J, Asner G, Duren R, *Methane Plume Mapping Over Shallow Water Offshore Oil and Natural Gas Platforms in the Gulf of Mexico*, AGU Fall Meeting, Chicago, 2022.
- Pu T, Gerlein-Safdi C, Kort EA, Bloom AA, Li M, *Coupling CYGNSS and Digital Elevation Data for High Spatio-temporal Mapping of Inundation*, AGU Fall Meeting, Chicago, 2022.
- Thorpe AK, Kort EA, Cusworth D, Ayasse A, Bue BD, Yadav V, Thompson DR, Frankenberg C, Herner J, Falk M, Green RO, Miller CE, Duren R, *Methane Emissions Decline From Reduced Oil, Natural Gas, and Refinery Production during COVID-19*, AGU Fall Meeting, Chicago, 2022.
- Chen Y, Englander J, Gorchov Negron AM, Plant G, Fordice G, Schwietzke S, Zavala-Araiza D, Kort EA, Brandt AR, *Seven years of repeated mobile OGI surveys for tracking long-term trends in methane emissions from oil and gas facilities*, AGU Fall Meeting, Chicago, 2022.
- Huber DE, Steiner A, Kort EA, *The influence of soil moisture on soil NO<sub>x</sub> emissions: sensitivity to inputs and a more robust model parameterization*, International Global Atmospheric Chemistry (IGAC), Manchester, UK, 2022.
- \*Kort EA, *Using aircraft and satellite observations to study human influences on greenhouse gases*, American Chemical Society National Meeting, Chicago, IL, 2022.
- Kort EA, Plant G, Whiting E, Murray L, Maasackers J, Aben I, *Estimating urban methane emissions from space*, IWGGMS-18, virtual, 2022.
- Roten D, Lin JC, Kunik L, Mallia D, W, D, Oda T, Kort EA, *The Information Content of Dense Carbon Dioxide Measurements from Space: A Case Study with OCO-3*, IWGGMS-18, virtual, 2022.
- Ayasse AK, Duren R, Thorpe AK, Cusworth D, Kort E, Gorchov Negron A, Nallapu Ravi teja, Japatia B, Linden P, Heckler J, Asner GP, *Mapping Emissions Over Offshore Oil and Gas platforms Using Sun Glint with Carbon Mapper*, IWGGMS-18, virtual, 2022.
- Wu D, Liu J, Wennberg PO, Laughner JL, Palmer PI, Nelson RR, Lin JC, Kort EA, Eldering A, *Informing sector characteristics of urban CO<sub>2</sub> emissions using co-emitted trace gases*, IWGGMS-18, virtual, 2022.
- \*Gerlein-Safdi C, Bloom A, Kort E, Ruf C, *Using GNSS-R to better our understanding of the link between the carbon and the water cycles in tropical ecosystems*, AGU Frontiers in Hydrology, 2022.
- Pu T, Gerlein-Safdi C, Kort E, Bloom A, *Using CYGNSS for High Spatio-temporal Mapping of Inundation at the Global Scale*, AGU Frontiers in Hydrology, 2022.
- Thorpe A, Kort E, Duren R, Cusworth D, Herner J, Falk M, Bue B, Yadav V, Thompson D, Green R, Miller C, Frankenberg C, *COVID-19 impacts on California methane point source emissions*, EGU General Assembly 2022, Vienna, 2022.
- \*Huber D, Steiner AL, Kort EA, *Examining the role of soil moisture on soil NO<sub>x</sub> emissions*, AMS Annual Meeting 102, 2022.



- He J, McDonald B, Li M, McKeen S, Harkins C, Henze DK, Schwantes R, Frost G, Dickerson RR, Ren X, Kort EA, Smith M, *Investigating the Emission Changes over the US during the COVID-19 Pandemic*, AMS Annual Meeting 102, 2022.
- Dacic N, Plant G, Sullivan T, Kort EA, *Using airborne observations over the U.S. Corn Belt to quantify N<sub>2</sub>O emission and evaluate underlying controlling processes*, AGU Fall meeting, New Orleans, 2021.
- Dacic N, Plant G, Sullivan T, Kort EA, *Understanding the warming air that comes from food-making and animal land*, Up-Goer Five talk, AGU Fall meeting, New Orleans, 2021.
- Plant G, Kort EA, Fordice G, Brandt AR, Chen Y, Gorchov Negron AM, Schwietzke S, Smith M, Sullivan T, Wilczak P, *Field Measurements of Flare Combustion Efficiencies and NO<sub>x</sub> Production Rates in Major US Oil and Gas Basins*, AGU Fall meeting, New Orleans, 2021.
- Gorchov Negron AM, Kort EA, Smith M, Plant G, Adames-Corraliza AF, Chen Y, Brandt AR, Schwietzke S, Zavala-Araiza D, Sullivan T, Wilczak P, *Emissions of CH<sub>4</sub>, CO<sub>2</sub>, and NO<sub>x</sub> from Offshore Alaska Oil and Gas Activities*, AGU Fall meeting, New Orleans, 2021.
- Ayasse A, Duren R, Thorpe AK, Cusworth D, Kort EA, Gorchov Negron AM, Heckler J, Asner G, *Methane Plume Mapping Over Offshore Oil and Gas platforms Using Sun Glint*, AGU Fall meeting, New Orleans, 2021.
- Roten D, Mallia DV, Wu D, Lin JC, Oda T, Kort EA, *The Information Content of Dense XCO<sub>2</sub> Retrievals: the Potential of Extracting Sector-Specific Fluxes with OCO-3*, AGU Fall meeting, New Orleans, 2021.
- Thorpe AK, Kort EA, Duren R, Cusworth D, Herner J, Falk M, Bue BD, Yadav V, Thompson DR, Green RO, Miller CE, Frankenberg C, *COVID-19 impacts on California methane point source emissions*, AGU Fall meeting, New Orleans, 2021.
- Puhl M, Roiger A, Fiehn A, Gorchov Negron AM, Kort EA, Schwietzke, Pisoo IJ, Foulds A, Lee JD, France JL, Allen G, *Aircraft-based Mass Balance Estimate of Methane Emissions from Offshore Gas Facilities in the Southern North Sea*, AGU Fall meeting, New Orleans, 2021.
- \* Kort EA, *Observing and quantifying methane emissions from space*, Society of Petroleum Engineers webinar series on Climate, 2021.
- He J, McDonald B, Li M, McKeen SA, Harkins C, Schwantes R, Frost GJ, Dickerson RR, Ren X, Kort E, Smith M, *Modeling COVID Perturbation on Urban Emissions over the US*, 10th International Workshop on Air Quality Forecasting Research (IWAQFR), virtual, 2021.
- Lopez-Coto I, Sweeney C, Plant G, McKain K, Ren X, Karion A, Kort E, McDonald B, Gourdji S, Miller J, Dickerson R, Shepson P, Roest G, Gurney K, Stein A, Whetstone J, *Reduction in GHG emissions in the US North East Corridor due to COVID-19 lockdowns as measured by the East Coast Outflow Experiment*, EGU general assembly, virtual, 2021.
- \*Kort EA, Gorchov-Negron A, Plant G, Adames-Corraliza A, Hausman C, Allan M, Stoltenberg A, Chen Y, Brandt A, Conley S, Smith M, Ward R, Wilczak P, Schwietzke S, Zavala-Araiza D, *The F<sup>3</sup>UEL Project (Flaring & Fossil Fuels: Uncovering Emissions & Losses)*, AMS Annual Meeting 101, virtual, 2021.
- Sweeney C, Lopez-Coto ILG, McKain K, Shepson P, Kort EA, Plant G, Ren X, Dickerson RR, Gourdji S, Miller J, *The East Coast Outflow Experiment before and during SARS-CoV-2*, AMS Annual Meeting 101, virtual, 2021.
- Yu X, Millet DB, Wells KC, Henze DK, Cao H, Griffis TJ, Kort EA, Plant G, Deventer MJ, Kolka RK, Roman DT, Davis KJ, Desai AR, Baier BC, McKain K, Czarnetzki AC, Bloom AA, *Aircraft-*

*based Inversions Quantify the Importance of Wetlands and Livestock for Upper Midwest Methane Emissions*, AMS Annual Meeting 101, virtual, 2021.

\*Kort EA, Thorpe AK, Duren RM, Cusworth D, Miller CE, Green RO, Eastwood ML, Bue BB, Olson-Duvall W, Chapman J, *How has the Covid-19 pandemic response impacted methane emissions in California?* AGU Fall Meeting, virtual, 2020.

Gerlein-Safdi C, Bloom AA, Plant G, Kort EA, Ruf CS, *Improved prediction of tropical wetland methane emissions using new CYGNSS-based inundation maps*, AGU Fall Meeting, virtual, 2020.

Gorchov-Negron A, Kort EA, Adames-Corraliza AF, Brandt AR, Chen Y, Conley S, Hausman C, Plant G, Schwietzke S, Smith M, Zavala-Araiza D, *Methane and Nitrogen Oxides Emissions from the Offshore Oil and Gas Supply Chain in the U.S. Gulf of Mexico*, AGU Fall Meeting, virtual, 2020.

Yang EG, Kort EA, Ott LE, Feng S, Lauvaux T, *Toward Using Space-based CO<sub>2</sub> and NO<sub>2</sub> observations to Estimate Urban CO<sub>2</sub> Emissions*, AGU Fall Meeting, virtual, 2020.

Roten D, Wu D, Lin JC, Oda T, Kiel M, Eldering A, Kort EA, *Quantifying CO<sub>2</sub> Emissions from World Megacities with Emerging Dense Urban CO<sub>2</sub> Satellite Data: Using Lagrangian Particle Dispersion Modeling in a Los Angeles Case Study*, AGU Fall Meeting, virtual, 2020.

Duren R, Thorpe AK, Cusworth D, Kort EA, Heckler J, Olson-Duvall W, Bue B, Downey N, Dennison PE, Asner G, Green RO, Miller CE, *Methane point-source emissions from oil, gas, and coal operations*, AGU Fall Meeting, virtual, 2020.

Schimmel D, Ott LE, Liu Z, Chatterjee A, Stephens BB, McKinley GA, Lovenduski NS, Liu J, Bowman KW, Kort EA, Poulter B, Miller CE, *Impacts of the Novel Coronavirus shutdowns on CO<sub>2</sub> emissions, concentrations and distribution*, AGU Fall Meeting, virtual, 2020.

Chen Y, Shwerwin ED, Berman ESF, Jones BB, Gordon M, Kort EA, Brandt AR, *Quantifying methane emissions from oil and gas operations in the New Mexico Permian Basin with airplane-based hyperspectral detection*, AGU Fall Meeting, virtual, 2020.

Gonzalez A, Millet DB, Yu X, Baier B, DiGangi JP, Gvakharia A, Kort EA, McKain K, Plant G, *Fossil vs. non-fossil CO sources in the US: New airborne constraints from ACT-America and GEM*. AGU Fall Meeting, virtual, 2020.

Ahn D, Ren X, Stratton P, Dressen J, Shepson P, Kort EA, Sweeney C, Turner AJ, Whetstone FR, Salawitch RJ, Dickerson RR, *Reduced greenhouse gas emissions seen from the in-situ aircraft observation over the Baltimore, MD-Washington, D.C. area during COVID-19 pandemic period: Mass balance flux estimation of CO<sub>2</sub>, CO, CH<sub>4</sub> and source sector attribution using activity metric data*, AGU Fall Meeting, virtual, 2020.

Dickerson RR, Ren X, Salawitch RJ, Canty T, He H, Ahn D, Stratton P, Hall DL, Zeng N, Dressen J, Lopez-Coto I, Karion A, Whetstone JR, Sweeney C, Stein AF, Luke WT, Kort EA, Shepson P, McDonald BC, *Measurements and models of COVID-19 impacts on short-lived pollutants and greenhouse gases over the eastern US*, AGU Fall Meeting, virtual, 2020.

\*Plant G, Kort EA, Sweeney C, *Data-driven Urban Methane Emission Estimates Based on Aircraft Observations: Sensing Considerations and Results*, CLEO: Science and Innovations, Optical Society of America, virtual, 2020.

\*Plant G, Kort EA, Sweeney C, *Urban Methane Emission Estimates Based on Aircraft and Satellite Observations*, Applied Industrial Spectroscopy, Optical Society of America, virtual, 2020.

Lopez-Coto I, Plant G, McKain K, Ren X, Karion A, Sweeney C, Kort EA, McDonald B, Gourdji S, Miller, JB, Dickerson RR, Shepson PB, Roest G, Gurney K, Prasad K, Whetstone JR, *East Coast*

*Outflow (ECO) experiment during pandemic times*, NOAA Global Monitoring Annual Conference, virtual, 2020.

\*Plant G, Kort EA, Maasackers JD, Aben I, *Exploring urban methane emissions from TROPOMI CH<sub>4</sub> and CO observations*, NOAA Global Monitoring Annual Conference, virtual, 2020.

Long MC, Stephens BB, Sweeney C, Kort EA, Keeling RF, McKain K, *The Atmospheric Signature of Southern Ocean Carbon Fluxes*, AGU Ocean Sciences, San Diego, 2020.

Sweeney C, Plant G, Kort E, Floerchinger C, *Tracking Urban Emissions of Greenhouse Gases during the East Coast Outflow (ECO) Experiment*, AMS100, Boston, 2020.

\*Kort EA, Gorchov Negron AM, Plant G, *Methane Emissions from Oil and Gas Systems: Losses in Production and Consumption*, AGU Fall Meeting, San Francisco, CA, 2019.

\*Kort EA, Gvakharia A, Plant G, *Evaluating Regional N<sub>2</sub>O Emissions and Drivers Using Airborne Observations*, AGU Fall Meeting, San Francisco, CA, 2019.

Huber D, Kort EA, Steiner AL, *Space-Based Observations of Seasonal NO<sub>x</sub> Emissions from Agriculture*, AGU Fall Meeting, San Francisco, CA, 2019.

Plant G, Kort EA, Maasackers JD, Aben I, *Urban Methane Emissions Estimates from TROPOMI CH<sub>4</sub> and CO Observations*, AGU Fall Meeting, San Francisco, CA, 2019.

Wu D, Lin JC, Fasoli B, Oda T, Kort EA, Duarte H, *Towards quantifying urban CO<sub>2</sub> emissions for global cities using column CO<sub>2</sub> and SIF data*, AGU Fall Meeting, San Francisco, CA, 2019.

Sweeney C, Plant G, Kort EA, Floerchinger C, *Detecting urban emissions using commercial aircraft measurements*, AGU Fall Meeting, San Francisco, CA, 2019.

Nelson RR, Eldering A, Pavlick R, Kurosu TP, Kort EA, Oda T, Nassar R, O'Dell C, Taylor T, Somkuti P, Fisher B, Merrelli AJ, Crisp D, Kiel M, *OCO-3 Snapshot Area Mapping Mode: Early Results*, AGU Fall Meeting, San Francisco, CA, 2019.

Lin JC, Wu D, Roten D, Fasoli B, Oda T, Kort EA, *Overcoming challenges in using satellite-based CO<sub>2</sub> data to understand carbon emissions from cities around the world*, AGU Fall Meeting, San Francisco, CA, 2019.

Yu X, Millet DB, Wells KC, Griffis TJ, Henze DK, Cao H, Conley S, Smith M, Gvakharia A, Kort EA, Plant G, Czarnetzki A, *New constraints on regional methane emissions in the US Upper Midwest based on GEM aircraft measurements and the GEOS-Chem model*, AGU Fall Meeting, San Francisco, CA, 2019.

Kort EA, *Role of Space-Based Measurements in Urban Emissions Monitoring*, IG3IS/TRANSCOM meeting, Paris, 2019.

Kort EA, *Observational constraints on anthropogenic CO<sub>2</sub> emissions: current capabilities and the impact on detecting carbon-climate feedbacks*, AGU Chapman Conference, Understanding Carbon Climate Feedbacks, Scripps, 2019

Kort EA, Gorchov Negron AM, Smith ML, Conley S, *Airborne observation of fugitive methane emissions from offshore oil and gas platforms*, Atmospheric Chemistry Gordon Conference, Maine, 2019.

Kort EA, Gvakharia A, Smith ML, Conley S, *Using airborne observations to quantify N<sub>2</sub>O emissions from fertilizer plants and croplands in the Mississippi River Valley*, 8<sup>th</sup> International Symposium on Non-CO<sub>2</sub> Greenhouse Gases, Amsterdam, 2019.

- \*Kort EA, Turner AJ, Frankenberg C, *Contemporary Atmospheric Methane: Addressing Contradictions and Pathways Forwards*, AGU Fall Meeting, Washington DC, 2018.
- Negron AG, Kort EA, Smith ML, Conley S, *Methane Emissions from Offshore Oil and Gas Platforms in the Gulf of Mexico*, AGU Fall Meeting, Washington DC, 2018.
- Gvakharia A, Kort EA, Smith ML, Conley S, Frauhammer K, DelGrosso S, *Quantification and Analysis of Agricultural N<sub>2</sub>O Fluxes Using Continuous Airborne Atmospheric Observations*, AGU Fall Meeting, Washington DC, 2018.
- Huang Y, Kort EA, Karion A, Ware J, Plant G, Sweeney C, Floerchinger CR, Mueller K, *Excess Urban Methane Emissions from the Northeast Corridor Washington, DC/Baltimore Metropolitan Region*, AGU Fall Meeting, Washington DC, 2018.
- Yang EG, Kort EA, Wu D, Lin JC, Ye X, Lauvaux T, Oda T, *Toward using OCO-2 Observations and Lagrangian Modeling to Estimate Urban Carbon Dioxide Emissions in the Middle East*, AGU Fall Meeting, Washington DC, 2018.
- Sweeney C, Kort EA, Floerchinger CR, Plant G, Karion A, Shepson P, *The urban methane paradox: Results from the 2018 East Coast Outflow experiment*, AGU Fall Meeting, Washington DC, 2018.
- Floerchinger CR, Wofsy SC, Hainy KD, Sweeney C, Newberger T, Kort EA, Plant G, Gvakharia A, Shepson P, *Fractional methane emissions from natural gas infrastructure in urban domains in the Eastern United States using airborne measurements and Lagrangian Particle Dispersion Modeling*, AGU Fall Meeting, Washington DC, 2018.
- Karion A, Callahan W, Ghosh S, Gourdji S, Lopez-Coto I, Kort EA, Mueller K, Prinzevalli S, Stock M, Prasad K, Whetstone JR, Wong TM, *Overview of the North-East Corridor: Baltimore/Washington Urban Greenhouse Gas Observation Network*, AGU Fall Meeting, Washington DC, 2018.
- Yu X, Millet DB, Wells KC, Griffis TJ, Baker JM, Conley S, Smith M, Gvakharia A, Kort EA, Plant G, Wood JD, *New top-down constraints on methane emissions from animal agriculture based on GEM airborne measurements in the US Upper Midwest*, AGU Fall Meeting, Washington DC, 2018.
- Kort EA, Gvakharia A, Plant G, Smith ML, Conley S, *The 2017 Fertilizer Emissions Airborne Study (FEAST): Quantifying N<sub>2</sub>O emissions from croplands and fertilizer plants in the Mississippi River Valley*, NSF Atmospheric Chemistry Principal Investigator meeting, Boulder, 2018.
- Kort EA, Gvakharia A, Smith ML, Conley S, Frauhammer K, *The 2017 Fertilizer Emissions Airborne Study (FEAST): Quantifying N<sub>2</sub>O emissions from croplands and fertilizer plants in the Mississippi River Valley*, AGU Fall Meeting, New Orleans, 2017.
- Gvakharia A, Kort EA, Smith ML, Conley S, *Airborne testing and demonstration of a new flight system based on an Aerodyne N<sub>2</sub>O-CO<sub>2</sub>-CO-H<sub>2</sub>O mini-spectrometer*, AGU Fall Meeting, New Orleans, 2017.
- Yang EG, Kort EA, Ware JF, Ye X, Lauvaux T, Wu D, Lin JC, Oda T, *Using OCO-2 observations and Lagrangian modeling to constrain urban carbon dioxide emissions in the Middle East*, AGU Fall Meeting, New Orleans, 2017.
- Ye X, Lauvaux T, Kort EA, Oda T, Feng S, Lin J, Yang EG, Wu D, Elderling A, *Quantifying global fossil-fuel CO<sub>2</sub> emissions: from OCO-2 to optimal observing designs*, AGU Fall Meeting, New Orleans, 2017.
- Wozniak M, Steiner A, Ault A, Kort EA, Lersch T, Casuccio G, *Lidar measurements of boundary layer depolarization and CCSEM-EDX compositional analysis of airborne particles on collocated*

*passive samplers throughout the forest canopy during the 2016 airborne pollen season at UMBS, Pellston, MI, AGU Fall Meeting, New Orleans, 2017.*

Gourdji SM, Yadav V, Karion A, Mueller KL, Kort EA, Conley S, Ryerson T, Nehrkorn T, *Quantifying point source emissions with atmospheric inversions and aircraft measurements: the Aliso Canyon natural gas leak as a tracer experiment*, AGU Fall Meeting, New Orleans, 2017.

Wu D, Lin J, Oda T, Ye X, Lauvaux T, Yang EG, Kort EA, *Towards Interpreting the Signal of CO<sub>2</sub> Emissions from Megacities by Applying a Lagrangian Receptor-oriented Model to OCO-2 XCO<sub>2</sub> data*, AGU Fall Meeting, New Orleans, 2017.

McKain K, Sweeney C, Newberger T, Daube B, Stephens BB, Kort E, Commane R, Wofsy SC, Morgan EJ, Bent JD, Keeling RF, Montzka S, *Adaptation of a commercial greenhouse gas analyser for airborne measurements with expanded altitude range and application on the ORCAS and ATom campaigns*, GGMT, Switzerland, 2017.

Vogel FR, Turnbull J, Kort E, Gurney K, DeCola P, Tarasova O, and the IG3IS team, *Integrated urban Greenhouse Gas Information System: Advances in the urban GHG monitoring implementation plan and results of previous and current city-scale studies*, GGMT, Switzerland, 2017.

Stephens BB, Long MC, Keeling RF, Sweeney C, Kort EA, Morgan EJ, Bent JD, McKain K, Mikaloff-Fletcher S, Patra P, *Atmospheric oxygen constraints on Southern Ocean air-sea CO<sub>2</sub> flux seasonality*, ICDC10, Switzerland, 2017.

McKain K, Sweeney C, Long M, Stephens B, Kort E, Morgan E, Bent J, Keeling R, *Using large-scale vertical gradients of atmospheric trace gases to constrain air-sea CO<sub>2</sub> fluxes in the Southern Ocean*, ICDC10, Switzerland, 2017.

\*Kort EA, Stephens BB, Long MC, Keeling R, Sweeney C, and the ORCAS Science Team, *Early Results from ORCAS: The O<sub>2</sub>/N<sub>2</sub> Ratio and CO<sub>2</sub> Airborne Southern Ocean Study*, American Meteorological Society Annual Meeting, Seattle, 2017.

Kort EA, Yang E, Ware J, Ye X, Lauvaux T, Wu D, Lin J, Oda T, *Towards constraining megacity fossil-fuel emissions estimates with OCO-2 observations and Lagrangian modeling*, American Geophysical Union Fall meeting, San Francisco, 2016.

Hoecker-Martinez M, Kort EA, Long M, Stephens B, *Using Lagrangian flights and modeling to study O<sub>2</sub> and CO<sub>2</sub> fluxes over the Southern Ocean during the O<sub>2</sub>/N<sub>2</sub> Ratio and CO<sub>2</sub> Airborne Study (ORCAS)*, American Geophysical Union Fall meeting, San Francisco, 2016.

Stephens B, Long M, Keeling R, Sweeney C, Kort EA, Bent J, Morgan E, Watt A, Hoecker-Martinez M, Daube B, McKain K, Smith M, Newberger T, *Southern Ocean Zonal Scale Summertime Oxygen Outgassing and Carbon Dioxide Ingassing*, American Geophysical Union Fall meeting, San Francisco, 2016.

Atlas E, Schauffler S, Donets V, Apel E, Hornbrook R, Hills A, Stephens B, Kort EA, Sweeney C, Gierach M, *Trace Gas Distributions and Correlations Observed in The Southern Ocean Atmosphere During the ORCAS Mission*, American Geophysical Union Fall meeting, San Francisco, 2016.

Smith M, Kort EA, Gvakharia A, Sweeney C, Conley S, *Airborne Quantification of Methane Emissions over the Four Corners Region*, American Geophysical Union Fall meeting, San Francisco, 2016.

Thorpe A, Frankenberg C, Thompson D, Duren R, Aubrey A, Bue B, Green R, Gerilowski K, Krings T, Borchardt J, Kort EA, Sweeney C, Conley S, Roberts D, Dennison P, Ayasse A, *Attributing Methane and Carbon Dioxide Emissions from Anthropogenic and Natural Sources Using AVIRIS-NG*, American Geophysical Union Fall meeting, San Francisco, 2016.

- Ware J, Yadav V, Mueller K, Kort EA, Verhulst K, *Robustness to Atmospheric Transport Error in Urban Greenhouse Gas Flux Inversion: a Los Angeles Case Study*, American Geophysical Union Fall meeting, San Francisco, 2016.
- Ye X, Lauvaux T, Kort EA, Lin J, Oda T, Yang E, *Inverse modeling of fossil fuel CO<sub>2</sub> emissions at urban scale using OCO-2 retrievals of total column CO<sub>2</sub>*, American Geophysical Union Fall meeting, San Francisco, 2016.
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