

Publication Citations
AQRP Projects
FY 2012-2013

12-006

Journal Papers:

Gookyoung Heo, Peng Wang, Qi Ying, Ron Thomas, William P.L. Carter. Using chemically detailed emissions data to test assumptions used in developing chemical mechanisms: a case study for southeast Texas, USA. [To be submitted to Atmospheric Environment in Summer 2014]

Peng Wang, Gookyoung Heo, William P.L. Carter, Qi Ying. Comparison of a detailed and a lumped version of SAPRC-11 photochemical mechanism during a summer ozone episode. [To be submitted to Atmospheric Environment in Summer 2014]

Gookyoung Heo, Chia-Li Chen, Ping Tang, William P.L. Carter. Evaluation of mechanisms for major terminal and internal alkenes with environmental chamber data. [To be submitted to Atmospheric Environment in Summer 2014]

Gookyoung Heo, Shunsuke Nakao, William P.L. Carter. Evaluation of mechanisms for 1,3-butadiene with environmental chamber data. [To be submitted to Atmospheric Environment in Summer 2014]

Conference Paper:

Heo, G., Carter, W.P.L., Wang, P., Ying, Q., Thomas, R. (2013). Evaluating and improving atmospheric chemical mechanisms used for modeling ozone formation from alkenes. Presented at the 12th Annual CMAS Conference, Chapel Hill, NC, October 28-30, 2013.

12-012

Conference presentations:

C. Faxon, J. Bean, L. Hildebrandt Ruiz. Evidence of atmospheric chlorine chemistry in Conroe, TX: Regional implications. American Chemical Society Southwest Regional Meeting, November 2013, Waco, TX.

J. Bean, C. Faxon, L. Hildebrandt Ruiz. Atmospheric processing of pollutants in the Houston Region: First insights from DISCOVER-AQ. American Chemical Society Southwest Regional Meeting, November 2013, Waco, TX.

L. Hildebrandt Ruiz, J. Bean, G. Yarwood, B. Koo, U. Nopmongcol. Formation and Gas-Particle Partitioning of Organic Nitrates: Influence on Ozone Production. American Association for Aerosol Research Annual Meeting, October 2013, Portland, OR.

Planned publications:

C. Faxon, J. Bean and L. Hildebrandt Ruiz. Preliminary title "Significant Inland Concentrations of ClNO₂ Detected in Conroe TX during DISCOVER-AQ 2013". Submission planned for August 2014.

J. Bean, C. Faxon and L. Hildebrandt Ruiz. Manuscript summarizing particle-phase measurements from DISCOVER-AQ. Submission planned for late 2014.

13-016

Gary Morris presented a poster entitled "Tropospheric Ozone Pollution Project (TOPP) Overview: A Context for DISCOVER-AQ Houston 2013" at the DISCOVER-AQ Science Team Meeting on February 27, 2014.

13-024

NASA ACAST meeting at Rice University in Houston, TX (Jan. 14-16, 2014), where Xinrong Ren gave a talk titled: "Measurements of trace gases at the Manvel Croix and Galveston sites during DISCOVER-AQ";

NASA DISCOVER-AQ science meeting at NASA Langley in Hampton, VA, where Winston Luke gave a talk titled: "NOAA/Air Resources Laboratory Surface Observations at Galveston and Manvel-Croix: Summary and Comparison with Aircraft Data".

A paper is in preparation with the intent to submit to Atmospheric Chemistry and Physics within about 6 months.

12-028

Implementation and Refinement of a Surface Model for HONO formation in a 3-D Chemical Transport Model. Prakash Karamchandani¹, Chris Emery¹, Greg Yarwood¹, Barry Lefer², Jochen Stutz³, Evan Couzo⁴, and William Vizuete⁵. (¹ENVIRON, ²University of Houston, ³University of California-Los Angeles, ⁴Massachusetts Institute of Technology, and ⁵University of North Carolina.)

Impacts of heterogeneous HONO formation on radical sources and ozone chemistry in Houston, Texas. Evan Couzo¹, Barry Lefer², Jochen Stutz³, Greg Yarwood⁴, Prakash Karamchandani⁴, Barron Henderson⁵, and William Vizuete¹. (¹University of North Carolina (now at MIT), ²University of Houston, ³University of California-Los Angeles, ⁴ENVIRON, ⁵University of Florida.)

12-032

Poster at the American Geophysical Union national meeting (Dec 2013) *Initial characterization of surface-based carbonaceous aerosol during DISCOVER-AQ in Houston, TX* Rebecca J. Sheesley, Tate E. Barrett, Subin Yoon, Adelaide Clark and Sascha Usenko

Poster at the DISCOVER-AQ Science Working Group meeting (Feb 2014) *Initial characterization of surface-based carbonaceous aerosol during DISCOVER-AQ in Houston, TX* Rebecca J. Sheesley, Tate E. Barrett, Subin Yoon, Adelaide Clark and Sascha Usenko

Manuscript in preparation. Submission planned to Atmospheric Environment in summer 2014. Draft title: "*Initial characterization of surface-based carbonaceous aerosol during DISCOVER-AQ in Houston, TX.*"

12-TN1

Presentation:

"A regional chemical reanalysis prototype" Pius Lee , Greg Carmichael, Tianfeng Chai, Rick Saylor, Li Pan, Hyuncheol Kim, Daniel Tong, and Ariel Stein

Poster:

"Preliminary analyses of flight measurements and CMAQ simulation during Southeast Nexus (SENEX) field experiment" Li Pan, Pius Lee , Hyun Cheol Kim, Daniel Tong ,Rick Saylor and Tianfeng Chai

Publication:

Pius Lee, Fantine Ngan, Hang Lei, Barry Baker, Bright Dornblaser, Gary McGauhey, and Daniel Tong. An Application for Improving Air Quality: a Houston Case Study, Earthzine 2014 [available at: http://www.earthzine.org/2014/03/29/an-application-for-improving-air-quality-a-houston-case-study/?shareadraft=baba698217_53330c8eab882]

12-TN2

The project team presented at the Community Modeling and Analysis System (CMAS) Conference in October 2013.

Presentations:

"HCHO and NO₂ column comparisons between OMI, GOME-2 and CMAQ during 2013 SENEX campaign (21 slides)" Hyun Cheol Kim, Li Pan, Pius Lee, Rick Saylor, and Daniel Tong

Posters:

Fine-scale comparison of GOME-2, OMI and CMAQ NO₂ columns over Southern California in 2008" Hyun Cheol Kim, Sang-Mi Lee, Fong Ngan, and Pius Lee