

***Interactive comment on “Quantification of CO<sub>2</sub> and CH<sub>4</sub> emissions over Sacramento, California based on divergence theorem using aircraft measurements” by Ju-Mee Ryoo et al.***

**Ju-Mee Ryoo et al.**

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**Response to Reviewer #1**

Thank you very much for your efforts on behalf of our paper titled “Quantification of CO<sub>2</sub> and CH<sub>4</sub> emissions over Sacramento, California based on divergence theorem using aircraft measurements” submitted by Ju-Mee Ryoo, Laura T. Iraci, Tomoaki Tanaka, Josette E. Marrero, Emma L. Yates, Inez Fung, Anna M. Michalak, Jovan Tadic, Warren Gore, T. Paul Bui, Jonathan M. Dean-Day, Cecilia S. Chang.

We found Reviewer #1’s comments very helpful, and they played a large role in improv-

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ing the quality of this paper. Based on the reviewer’s comments, we have reformulated our study in three significant ways (as suggested by both reviewers): we have removed the November 2015 flight from the analysis due to low and variable wind speeds; we have included additional plots to make the measured data more directly available to the reader; and we have reorganized the presentation of the material using the scheme suggested by Reviewer #2 (and guided by the confusion we caused Reviewer #1). Some of the related minor comments became immaterial after these major changes were made, but we have addressed the key critiques and suggestions and will incorporate them in the revised manuscript. Enclosed is a point-by-point response to the review comments. We have shaded with gray highlighting the many useful specific comments that will be implemented in the revised manuscript, once we are asked to prepare it.

The response letter to reviewer #1 is provided in the Supplement.

Thank you again for your support and consideration, and we look forward to hearing a positive decision from you.

Sincerely, Ju-Mee Ryoo and Coauthors

Please also note the supplement to this comment:

<https://www.atmos-meas-tech-discuss.net/amt-2018-254/amt-2018-254-AC1-supplement.pdf>

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Interactive comment on Atmos. Meas. Tech. Discuss., doi:10.5194/amt-2018-254, 2018.

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