

## ***Interactive comment on “Closing the Dimethyl Sulfide Budget in the Tropical Marine Boundary Layer during the Pacific Atmospheric Sulfur Experiment” by S. A. Conley et al.***

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Thank you for your detailed comments. Most of the suggestions have been incorporated into the manuscript but there were some that we preferred not to change. Using the comment numbers given by referee #2:

4. We removed the statement about neglecting fluctuations in the oxidant field. Since we were really calculating the photochemical loss as a residual in the dynamical budget, there was no need for such an assumption.
5. The upper case letters are used to identify mean quantities. We briefly mention that in the intro section.

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7. Deleted a.m.s.l. completely. It was unnecessary and technically incorrect since the altitude (radar altimeter) was measured above the actual sea level.

10. Good call on the circle flight discussion. We added to that sentence the fact that the exhaust didn't significantly impact DMS measurements - the patterns were abandoned because of the contamination with SO<sub>2</sub> and O<sub>3</sub> measurements.

12. Yes, the flight times could well bias the ratio of surface flux to entrainment flux. It is interesting that the ratios are almost the same for the night (~3AM and later) flights and the day flights. We added a statement about the uncertainty to the section.

13. The matrix X has different units in each column. When multiplied by its transpose and inverted, we end up with the proper units to match the selected coefficient.

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