

The authors have complied with my suggestions. But in so doing have created more questions that have indicated further improvements.

L465-6. This is not normalization. LWC within a size bin must be considerably less than LWC of the entire spectrum. Thus, concentrations in all bins are reduced by this “normalization.”

This reduction would be greater for the smaller size bins that would have less LWC due to smaller sizes to the third power. Multiplying by the ratio of LWC within each bin to the mean or median LWC of the spectrum would be a normalization. Or concentrations could be normalized according to the size widths of the bins? This needs explanation. Is whatever normalization that was or should be applied a common practice in cloud microphysics research?

L475-6. This assertion requires explanation. Calculate the broader spectra and demonstrate. Is this over the entire size range or over some part of the droplet size range. Moreover, ship emissions are included in Fig. 12B not 12C, which is biomass. But even so panel B includes industrial. So, it is a further assertion to single out ships from industrial when both are included in Fig. 12B.

L484-489. This paragraph is an out of context assertion. In order to stand it requires data backup and proper context.

L36-38. This is an assertion that was not demonstrated.

Explain the meaning of Fig. 3. There are 10 plots in A & B. Are they related one-by-one to each other or is this just a coincidence? How are the two panels related? Apparently, you want to show that the cloud measurements were above the LCL.

L287-291. How do the emissions of a research vessel compare to those of cargo and tanker vessels? I doubt that Sally Ride used Bunker Fuel. What fuel did it use?

L603. Four hours seems like a short time for a ship plume to disappear. Is there a reference to this fact?

Minor suggestions:

L30. Insert clean before marine.

L33 & 35. SO₄ should not be the same. Consistent with L350 & L513 SO₄ should be 2.3 μg/m³ in L33. Also consistent with L350 & L513 ORG should be 2.2 μg/m³ in L32 and NH₄ should be 0.3 μg/m³. The others in L32-3 are consistent with L349 & L350 and L523-4.

L43 & 45. Insert clean before marine.

L46. Add d to influence.

L63-64. Insert Hallett et al. (1989).

L77. Insert Hudson et al. (2009) and Hudson & Noble (2014).

I appreciate N_c. But now N_c can be employed in L80, L276, L402 and L455.

L81. Insert Hudson & Yum (2002).

L86-7. Move constantly in front of into.

L107. Add Twohy et al. (2001).

L290. Complementary.

L331. Change aerosols to particles.

L339. Insert clean before marine.

L401. Delete in length.

L588. Remove away.

- Hallett, J., J.G. Hudson, and C.F. Rogers, 1989: Characterization of combustion aerosols for haze and cloud formation. *J. Aeros. Sci. and Technol.*, **10**, 70-83.
- Hudson, J.G., and S. Noble, 2014: CCN and vertical velocity influences on droplet concentrations and supersaturations in clean and polluted stratus clouds. *J. Atmos. Sci.*, *71*, 312-331. DOI: 10.1175/JAS-D-13-086.1
- Hudson, J.G., S. Noble, V. Jha, and S. Mishra, 2009: Correlations of small cumuli droplet and drizzle drop concentrations with cloud condensation nuclei concentrations. *J. Geophys. Res.*, **114**, D05201, doi:10.1029/2008JD010581.
- Hudson, J.G., and S.S. Yum, 2002: Cloud condensation nuclei spectra and polluted and clean clouds over the Indian Ocean. *J. Geophys. Res.*, **107(D19)**, **8022**, doi:10.1029/2001JD000829.
- Twohy, C.H., J.G. Hudson, S.S. Yum, J.R. Anderson, S.K. Durlak, and D. Baumgardner, 2001: Characteristics of cloud nucleating aerosols in the Indian Ocean region. *J. Geophys. Res.*, **106**, **D22**, 28699- 28710.