

Interactive comment on “Detection and characterization of drizzle cells within marine stratocumulus using AMSR-E 89 GHz passive microwave measurements” by M. A. Miller and S. E. Yuter

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Reviewer Comment

1) The title. From what they state in the "Caveats" in Section 2.2.3, the authors are well aware that their proposed method is limited to the "heavy drizzle in marine stratocumulus regions with large scale subsidence and shallow boundary layers..." However, the title of the manuscript addresses marine stratocumulus in general and this is a bit

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misleading. I am not sure if the type of marine stratocumulus addressed by the paper can be successfully included in the title, but certainly it would alert the potential reader, as it is proper.

Authors' Response

We have altered the title to reflect that we are focusing exclusively on subtropical stratocumulus.

Reviewer Comment

2) Section 3.1. The comparison with VOCALS ship-based radar data appears to be qualitative. Either the authors include a more quantitative comparison or explicitly state that the comparison is intended just as a quicklook at the ability of the algorithm to detect the overall mesoscale features. The present structure of the section initially gives the impression that a thorough comparison will be presented, but this isn't the case. I would be in favor of a quantitative comparison, for example included as a table.

Authors' Response

We did intend the comparison to VOCALS ship-based radar data to be a quick, qualitative look at the ability of the drizzle detection algorithm to capture the overall mesoscale features of the drizzle. Nevertheless, we have added hit, miss, false alarm statistics to better quantify the performance.

Reviewer Comment

3) Figs. 5-7. The presentation of these figures seems to be rather messy. The following are the errors that were detected, but the authors are urged to take a thorough look since the reviewer might have overlooked other problems. It appears that Fig. 6 and Fig. 7 were interchanged. This seems to be the problem that reflects both in the figure captions and in the text. Pacific and Atlantic are mixed up and the discussion

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throughout the text becomes totally messed up. See a) Caption of Fig. 6 should be the one of Fig. 7 and vice versa, at least judging from Fig. 4 where the areas are introduced. b) p. 4582 rows 15-17. c) p. 4583 rows 8-11 and row 21.

Authors' Response

Figures 6 and 7 were switched in the AMTD version. This was likely due to the lead author mis-labeling the figures during the phase of the submission process where figures are uploaded separately from the main manuscript. This will be corrected in the revised version of the manuscript.

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