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Atmospheric Measurement Techniques Discussions

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

Anonymous Referee #2

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The manuscript represents a novel contribution to the exploitation of AMSR-E 89 GHz channel for the detection and characterization of drizzle cells in marine stratocumulus layers. The paper is relevant to the journal in that it widens the usage of the AMSR-E sensor. Moreover, its scientific quality is generally good so that it can be considered for publication after a couple of minor issues are taken into consideration.

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 stratocu-

mulus 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 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.

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 comnparison will be presented, but this isn't the case. I would be in favor of a quantitative comparision, for example included as a table.

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 throughout the text becomes totally messed up. See a) Caption of Fig. 6 should be the one of Fig. 7 and viceversa, 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.

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