

Interactive comment on “Sea surface wind speed estimation from space-based lidar measurements” by Y. Hu et al.

Y. Hu et al.

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Response to Reviewer #2:

1. We added the following sentence, as the reviewer suggested: Comparisons of ocean surface wind speeds derived from space based microwave radiometer and lidar measurements can help assess uncertainties of microwave radiometer derived wind speeds associated with issues such as calibration, raindrops, drizzles and sunglint.
2. We changed the color of figure 6 as the reviewer suggested and it indeed improved the figure's readability.
3. The reviewer is correct that we over-estimate wind speed at regions slightly over regions with higher aerosol loading. This is caused by the simplified 1064nm aerosol extinction estimation used in this study and can be improved with more realistic aerosol

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lidar ratios.

4. The blank regions in Fig. 6 are the regions with too much clouds and aerosols so that we did not perform the lidar retrievals. We added this sentence in the paper as well.

5. We changed the sentence to “potential AMSR-E wind speed bias caused by sea ice and drizzle contamination”;

6. It will be natural to have some validation activities to compare with in situ measurements. But we do not have a plan (resource) to do that yet.

7. We corrected the error in line 2778. Thanks for pointing it out.

Interactive comment on Atmos. Chem. Phys. Discuss., 8, 2771, 2008.

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