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Ocean Science Discussions

Interactive comment on "Measuring currents, ice drift, and waves from space: the Sea Surface KInematics Multiscale monitoring (SKIM) concept" *by* Fabrice Ardhuin et al.

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The paper starts with a wonderful assessment of the spatial temporal sampling capabilities of SKIM, and topics for which it can make substantial contributions. Figure 1 is also extremely effective in describing the spatial-temporal sampling. The advantages and compromises of proposed methods for measuring currents is well described, with the points nicely emphasized in Figure 9. In general, the paper is quite easy to read, with some of the more complex details in appendix A. The clarity of the appendices is not as good as the main body of the text and could be improved. The only large gap is a clear description of the products that are expected.

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Discussion paper

Major comments:

1) Page 8 & 9: The goal is clearly stated to be the retrieval of the Eulerian velocity. However, the velocity including Stokes drift will be of use for many topics (e.g., oil drift and air-sea fluxes). Will the Stokes drift also be made available?

Minor Comments:

2) Page 2, line 23: ATI provides speeds or more accurately vector components rather than velocities. Similar errors in word usage should be corrected throughout.

3) Page 3, line 7: at (UGD) to the end of the line.

4) Page 5 line, 2, change ‘sea surface Us’ to ‘surface Us’

5) Figure 10 would be better with a sharper color bar

6) The clarity of the caption for fig. A1 should be improved

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