

Interactive
Comment

Interactive comment on “On the influence of wind and waves on the underwater light field” by M. Hieronymi and A. Macke

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I had the opportunity to read the interactive comment of Referee #1 and a reply of Dr.Hieronymi to it. My comments as follows below.

1. The paper addresses relevant scientific questions within the scope of OS and presents new interesting results obtained by a novel two-dimensional Monte Carlo model.
2. I agree with Referee #1 as to the title. In my opinion, a new title proposed by Dr.Hieronymi "On the influence of wind and waves on underwater irradiance fluctuations" is O.K.
3. I also agree with Referee #1 that the paper could be significantly shortened as to

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the description of the applied methods by referencing to Hieronymi et al.(2012).The present paper could only include short theses of the applied methods with listing the values of parameters used for modeling.

4. I also want to support Referee #1 as to the need of brief consideration of how the results obtained can be changed under other conditions (in particular, with different sun zenith angle).

5. The range of wind speeds specified by authors 3-15 m/s is somewhat surprising. The authors themselves mention that the most favorable conditions for light focusing by waves are at moderate winds of 2-7 m/s and that a foam and bubbles are created under such strong wind as of 15 m/s. It is obvious that the presense of foam and bubbles will distort the purely geometrical effect of the sea surface.

6. The obtained results are well illustrated by clear graphics but, seems, it would be useful to give an integrated table containing the obtained key parameters of fluctuations in numerical form (say, for three wind of 3, 6, and 10 m/s).

Interactive comment on Ocean Sci. Discuss., 9, 1231, 2012.

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