

Interactive comment on “Yellow substance and the shades of blue in the Mediterranean Sea” by A. Morel and B. Gentili

Anonymous Referee #4

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Technical merits

This manuscript presents a lucid explanation for the errors in remote sensing estimates of Chl in the Mediterranean Sea. Clearly, CDM is the usual suspect when standard algorithms (i.e. OC4) overestimate Chl. In this sense, this conclusion is not a useful contribution. However, Morel and Gentili provided a practical approach to separate the contribution of CDM and produce reasonable estimates of both Chl and CDM. Their conclusions are well tied to the oceanography of the Mediterranean Sea. The comparison with the Atlantic Ocean was very useful. Their conclusions about the relative importance of bb versus CDM are very important. I find it very useful in my own work.

The comparison between MERIS and SeaWiFS is very informative and useful.

C2733

The manuscript is well written. However, I subscribe to the principles found in “The Elements of Style” by Strunk and White. So, I find the manuscript verbose and, as a consequence, too long. This manuscript could be ~50% shorter. Eliminating most modifiers would help. Most figures are of good quality and easy to interpret. However, I had problems understanding figure 1. This could be my own shortcoming, but I encourage the authors to review this figure.

Some specific comments keyed to page and line number in the manuscript:

8505-21 . Apologetic quotation marks are not appropriate. If the best term is not “greener”, then find a better word. Same with most instances of “”.

8509-26 . will be used or was used.

8510-12 . I would not call it excess of CDM. The concentrations are what we would expect in environments with coastal runoff. CDM is discussed in reference to its effect upon the Chl retrievals. Perhaps the authors could use this as a guidance to find a better term. I suggest “Geographical distribution and.....of Φ ” . This is what is discussed in this section.

8512-19. Please refer to figure 3.

8514-24 – same problem as with 8510-12

8516-8 through 8517-7 . Very nice!

Recommendation:

I recommend acceptance with minor revisions.

Interactive comment on Biogeosciences Discuss., 6, 8503, 2009.