Interactive comment on "CoastColour Round Robin datasets: a database to evaluate the performance of algorithms for the retrieval of water quality parameters in coastal waters" *by* B. Nechad et al.

Anonymous Referee #2

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In this paper the authors compare the performance of different algorithm's performance in retrieving in water properties in coastal waters. They compare MERIS Level 2 match-ups, in situ reflectance measurements and Hydrolight simulations. The database itself is a very important contribution since it puts together several dataset available around the world of reflectance and water constituents (chl, TSM, CDOM).

Abstract: the abstract is more of a summary of the material and methods rather than a summary of findings. This paper has a lot of information and results and I think that this

manuscript could be improved by summarizing what the main results are. In the results and discussion section I found it hard sometime to see what the take-home message was.

I would suggest minor changes to this publication.

Specific comments:

P188,L12: a flow chart in fig4 is mentioned but it looks like figure 4 is in fact the same as figure 6? I couldn't find any flow chart on figure 4

Throughout the manuscript: I would suggest to use the abbreviation 'Med.' Instead of 'Md.' for the Mediterranean, it seems more intuitive.

P190, L27: add 'of' in 'comprises of a set of 336..'

The authors define TChl as the chlorophyll from the HPLC and Chl as the chlorophyll from fluorometry and spectrophotometry but then from p.190 onwards a new abbreviation called CHL is introduced for chlorophyll from HPLC (?). On p.190, L22 for example: 'The CHL data were measured by HPLC…'. How is the abbreviation CHL different from TChl and Chl? P.194,L16: 'the median HCL..', is this HPLC or fluorometric data?

Some of the figure seem to be in low quality. (Fig. 7, 15). Also I think every figure should be self-explanatory. So for example I would add in the caption of Figure 7 what the green line is and what the red and blue '+' represent.

p.196,L5: ' The ranges of Kd(443) and Kpar measurement (Fig. 6c and d)..'. I am assuming the authors meant Figure 9?

p.196, L13: "The noticeable shift between Kd (or Kpar) in Acadia and Cape Verde may be partly explained by the different Chl a ranges: around 0.2 mgm−3 in Cape Verde and 2 mgm−3 in Acadia (Fig. 7a)."- I couldn't see the chlorophyll data for Cape Verde on Figure 7a p196,L25: shouldn't 'their models..' be singular? The author talk of Hydrolight, correct?

Same line: '. . .adopted the distributions documented in..'. Assume the author talk about the distribution of chlorophyll? If so I would change it to 'distributions of chlorophyll document in..' as to avoid any confusion

p.197, L5. I would reference Figure 10 a here. Throughout the text I would suggest the authors check to make sure that they cite the figures they are talking about. There is a lot of figure and sometime it is hard to follow which figure they are discussing.

p.198,L25:'The different periods of sampling relative to the algal blooms events in each site (Fig. 3)..' I am not sure how the author concluded this from Fig. 3 since the period of algal bloomf or each of the sites is not presented on this figure?