Response to reviewer: we would like to thank very much the topical editor, Mrs G. Neukermans for the helpful comments.

Figures:
Fig 1. Basic statistics of the fitted curve are required, including the standard error on the estimated regression coefficients and an RMSE.

Answer: Basic statistics were added in Figure 1 and their description is provided in the legend: "*The regression coefficient (r), the median absolute percentage difference (MAPD), the median ratio (MR) and the mean bias (MB) values are indicated. These statistical indicators (MAPD, MR and MB), are calculated in normal space as described in Jorge et al. (2021).*"

The sentence " *The median absolute percentage difference (MAPD), the median ratio (MR) and the bias are calculated in normal space and are described in Jorge et al. (2021).*" in section 3.1 (line 156 in the previous version of the paper) was deleted as it is now in the legend of the figure 1.

Fig. 3. Labels for the panels a and b are missing
Fig. 4. Labels for all 12 panels are missing; it is not clear which map corresponds to which month.
Typos:
Line 191: outside the "scope" (instead of "scoop")

Answer: it was modified.

Already pointed out by reviewer 2: line 92 a threshold of 4000 m deep to mask coastal waters seems like an error. Should this be 400 m instead?

Answer: As we already answer to the reviewer, this is 4000 m, as in the mask defined in Melin and Vantrepotte (2015) to better take into account to some very specific areas where river plumes are observed further than 200 km.

The biggest remaining issue is the fact that the paper does not show any evidence that Organic and mixed particle compositions can be (reliably) detected from Ocean color remote sensing (as shown in Fig. 2b); also pointed out by reviewer 1.
Why is Fig. 2b limited to SOMLIT data? Why not include the entire in situ dataset of POC and SPM and match that with MERIS reflectance? You might end up with a dataset that includes organic dominated samples.

Answer: Figure 2b is not limited to SOMLIT data anymore. We added match up obtained from DS dataset (please remind that, the in situ database, referenced as DS, is made of 325 coincident POC, SPM, and R_{rs} measurements, see section 2.1.1). The availability of R_{rs} in situ data points allows us now to discard some in situ POC/SPM match-up data points for which we observe bad satellite R_{rs} retrieval (which is not the case with the original match-up data points coming from only SOMLIT, as R_{rs} are not available in SOMLIT dataset). Figure 2b displays that 73.7% of organic-dominated data points, 44.4% of mixed data points and 68.4% of mineral-dominated data points are well classified. Misclassified data points are due to inaccurate R_{rs} retrievals.

We re-wrote the text from line 162 to line 172.

We added in the text (lines 95-100) "*Due to the absence of organic-dominated match-up data points using the MERIS sensor, complementary match-up data points were added to DSM by looking at SeaWiFS match-up with DS. We kept only the match up data points with a good Rrs retrieval (only possible using DS). For that purpose, only data points with Rrs(in situ)/Rrs(satellite) values, from 412 to 560 nm, below 0.5 or above 1.5 are selected. The DSM dataset is composed of 101 matched points after the application of these criteria. The POC/SPM mean value is of 0.0801 for DSM instead of 0.1136 and 0.0895, for DS0 and DS, respectively.*"

Values concerning DSM were changed in table 1 and lines 99-100 as data points were added in DSM as explained in section 2.1.2.

In the light of this remark -Unless I missed something important, I suggest to tone down the conclusion and the abstract which state that PPC can be detected from OCR remote sensing, as there is only evidence that the satellite retrieval works for mineral dominated particle suspensions in 63% of cases, despite the fact that the results presented in Fig. 3 and 4 are encouraging, as well as the results presented in Fig. 2a.

We showed that misclassified data points are due to inaccurate satellite R_{rs}. Using DS, we added match-up for organic and mixed waters. In Fig. 2b, 68.4 % of mineral-dominated data, 44.4 % of mixed data, and 73.7 % of organic-dominated data are well-classified. We showed that misclassified data points are due to inaccurate satellite R_{rs}.