We would like to first express our thanks to the reviewer for his/her constructive comments. The responses to these are below after the reviewer points that are in italics.

(1) Many estimates of the mass absorption efficiency (MAE) of OC have been published, including Kirchstetter et al. (2004), Barnard et al. (ACP, 2008), and Sun et al. (Geophysical Research Letters, 2007). For a wavelength of 440 nm, the MAE seems to lie in a range of 1-2 m^2/g. It would be interesting to derive MAE for the OC retrievals and see how it compares with these previously published values. This could be done using the same data to construct Figure 4. I don't think this would be a difficult task. I am therefore asking to authors to implement this suggestion, or argue against it. This task might help constrain the uncertainty.

This was a very good suggestion, thank you. We included MAE analysis in the revised paper. This is an useful additional point of view to assess how to possibly constrain a-priori imaginary index.

(2) The fact that these estimates are quite uncertain should be stated more strongly in the conclusions (maybe by adding a point number 4). There are many other sources of uncertainty aside of the assumption of refractive indicies (such as the assumption of OC density). I think a lot of these uncertainties are discussed in Schuster et al. (2009), at least for BC retrievals. If applicable, the authors might refer (again) to this paper.

We stressed this uncertainty (also mentioning explicitly OC density) now by a separate point in the Conclusions.

(3) The authors should provide a table and some discussion in the text about the locations of the sites. For example, and number of locations are listed in Table 2, but it's not obvious to me where some of these sites are located. Where is Alta Floresta?

There is a new table (Table 2) that gives not only the location, but also information about the data volume in these sites, that we focused on most closely in our analysis.

Technical comments:

(1) page 18371, line 7. Remove the "greater than" sign

Done.

(2) page 18375, line 18. What is "alpha" in the "alpha/rho" ratio?

This is explained now.

(3) page 18376, line 11-12. "when the dust influence is attempted to exclude" should be changed to "when we attempt to exclude the dust absorption".

Done.