

## ***Interactive comment on “Contribution of dust inputs to dissolved organic carbon and water transparency in Mediterranean reservoirs” by I. de Vicente et al.***

### **Anonymous Referee #1**

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The authors studied the atmospheric input of organic carbon into three reservoirs in southern Spain. DOC and chromophoric compounds (CDOM) were measured in dry and wet deposition as well as in the water column of the reservoirs. The contribution of atmospheric deposition to the reservoirs was estimated to be relatively low. Relationships between DOC and the atmospheric inputs were found for two of the lakes characterized by special environmental conditions. The data are also discussed with estimates of primary production. The manuscript describes a very special system. The discussion is short and the interpretation of the results, DOC and CDOM, is arranged quite separately. I am missing a consistent and comprehensive discussion of all results. It is also quite speculative to relate to the atmospheric deposition to primary produc-

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tion, especially since primary production and exudation rates used for the DOC input of phytoplankton were only estimated. As presented, I feel that Biogeosciences may be not the suitable journal for publication. For the wide readership of Biogeosciences the impact is not broad enough and the interpretations are too vague.

Specific comments:

At the end of the introduction objectives and hypotheses are missing. It ends with a description of the locations and summary of the analytical work.

Methods: There is need for some more details about the methods, e.g. the sampling procedures such as air volumes collected, calculation of rates. Otherwise one has to refer to the reference to know the basic conditions. What is the reason to add ultrapure water to the samples if the volume is less than 1000 ml? Then you have to correct for this addition. I think a figure showing the location of the reservoirs instead of the surface to depth ratio is more informative. The characteristics of the reservoirs are already well described in chapter 2.1.

Results: It may be better to present the DOC data in  $\mu\text{M}$  instead of mM.

Page 8314, line 3-8: This is part of the discussion.

The discussion should be re-organized. I think the manuscript would benefit from combining the results and discussion section. Then a well written conclusions section could pull it all together.

Minor comments:

Page 8312, line 19: What depths were chosen? Samples take above the thermocline, may be better than “over”.

Figures: Use points instead of comma.