

***Interactive comment on “Large clean mesocosms and simulated dust deposition: a new methodology to investigate responses of marine oligotrophic ecosystems to atmospheric inputs” by C. Guieu et al.***

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We thank the reviewer for his comments. The only concern about the methodology is about the potential leakage at the junction between the upper and lower part of the bags. We understand this criticism as it was already a point that was raised by the editor before the publication of our MS in BGD. We have then added a section concerning this potential leakage: it was not actually possible to measure it (technically not possible as we didn't want to introduce some die to trace an eventual leakage because of contamination issues). Our arguments are the following: first, the design himself: 2x2

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large (8cm width) circles are tight together by the mean of 8 screws and (2), there is no pressure gradient or over type of gradient between the inside and the outside of the bag. The initial version of the MS has been modified accordingly and the section on top of page 2698 was added: “At the bottom of the main cylinder and at the top of the cone, two PVC circles (8 cm in width) were installed, thereby sandwiching the plastic. The two were held tightly together by 8 nylon screws, which created a strong bond between the two parts. One cannot overlook the possibility of some amount of water exchange between inside and outside of the mesocosm via the junction between the two parts, even if the PVC circles were tightly screwed. However, if it occurred, this would have concerned an extremely small water volume, as there is no pressure gradient between the inside and the outside of the mesocosm”. We have no more arguments to convince the reviewers that such system is very efficient to hold the 2 parts of the mesocosms as a one single structure. We propose to add, in the revised version, a small drawing of the enlarge view of the ‘sandwich’ to Figure 8. (Figure 8 has been modified).

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