

***Interactive comment on “Short scale (6 h)
temporal variation of sinking fluxes of planktonic
and terrigenous lipids at 200 m in the NW
Mediterranean Sea” by L. Méjanelle and J. Dachs***

Anonymous Referee #3

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The authors investigate short scale sinking flux at a station in the NW Mediterranean with emphasis on the variability of planktonic and terrigenous lipids. I was excited when I read the abstract where the lipid record, which shows considerable short term fluctuations, was presented in the context of hydrographic variability, coastal runoff, the plankton community in the water column and primary production. However, the paper itself does not present those data, and instead the reader is referred to other studies.

What is left is a listing of lipid fluxes which cannot be understood out of context. Furthermore, the particulate matter in the cups which after a 6 hr deployment period was furthermore divided in to 10 parts, often provided too little material for analysis of sev-

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eral of the lipids and samples, a point well recognized by the authors. Also, at several occasions specific lipids are attributed to species or genera, but the fact that those lipids were found in cultured species of a certain group does not mean that they in turn can be used to identify that species when found in the field.

There is a scarcity of data on flux records at that temporal resolution and the data have the potential to make for a very interesting story. But the environmental context has to be presented so the reader can interpret the observed flux variability. Not even POC flux or mass flux is shown, which is obviously a prerequisite to understanding any flux record. There are 9 more fractions of the sample available for analysis, but no other parameters are shown. I also recommend that the paper be carefully edited; I made many comments on the MS to improve style, but those will not be of much use if the MS has to be rewritten its entirety.

Based on those shortcomings, I cannot recommend publication of this paper.

Interactive comment on Biogeosciences Discuss., 6, 1229, 2009.

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