

***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 #4

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Review "Short scale (6 h) temporal variation of sinking fluxes of planktonic and terrigenous lipids at 200 m in the NW Mediterranean " by Méjanelle and Dachs.

The manuscript presents the short scale variability of lipid biomarkers in a sediment trap moored at 200 m depth in the NW Mediterranean. The work is part of a campaign named DYNAPROC2 that was carried out during September and October 2004 (though for an unknown reason the year is not mentioned in the text). The manuscript provides an enormous data set, which is a valuable addition to the present knowledge in marine biogeosciences. In the present stage, however, the manuscript should not be considered for publication.

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Interactive Discussion

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Comments: As already mentioned above the paper provides a substantial set of lipid biomarker data but the data are presented and discussed without much further information. The data clearly need to be evaluated in a broader context. For example, what is known about the oceanographic conditions (nutrients, currents etc.), is there some information about the phytoplankton (and zooplankton) community during the time of the experiment, what about the mass fluxes etc? Since only a tenth of the trap material was used for lipid analyses what happened to the rest? I guess some of the useful information could be found in the referred studies but the paper itself does not present those data.

On the other hand many of the published data are described and discussed in too much detail without gaining any relevant information. Just one example representative for many other: page 1238, lines 1-5: According to Fig. 3 one could argue that the alkenone temperature estimates generally agree with CTD temperatures measured between 0 to 30 m (except Sept. 29). In the manuscript it is described like that: Series A corresponds to 10-30 m, B to 20-50 m, C to 0-30 m. However, if discussed in so much detail what do we learn from that? If B is so much different from C what does this imply? Did the alkenone producer (not necessarily coccolithophorids by the way but certain haptophytes, cf., page 1237, lines 15/16) migrate through the water column? And if so, what could be the reason for that?

In summary, the manuscript needs to be edited very carefully or even rewritten entirely. Moreover, there are a number of misspellings (in the text and in the reference section) which could have been avoided easily by either proof reading or by using the spelling (and grammar) check of the text editor. The figures are generally ok but very small when printed. Overall, the manuscript leaves the impression that more care should have been taken in the first place.

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