

Interactive comment on “Efficiency of the silicate pump at a coastal oligotrophic site in the Mediterranean Sea” by K. Leblanc et al.

Anonymous Referee #2

Received and published: 22 June 2005

Review of the manuscript Efficiency of the silicate pump at a coastal oligotrophic site in the Mediterranean Sea by K. Leblanc, B. Quéguiner, P. Raimbault and N. Garcia.

The manuscript reports a detailed investigation of silica and carbon fluxes to the sediments at a coastal station in the northwestern Mediterranean Sea. The study covers seasonal time scales and provides interesting insights in the export fluxes of carbon and silica and their relation to each other. The manuscript is well organized and well written. I have only a very few minor comments and think that the manuscript deserves publication in BIOGEOSCIENCES after consideration of these comments.

Minor comments:

Chapter 2, Material and methods

Page 555, l3: please spell out DIW.

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Chapter 4, Discussion:

Page 560, l4. The suggestion of a too shallow depth of the upper trap seems to somehow weaken or contradict the surprising behavior of the trap yields discussed a few lines above. I suggest balancing both statements, i.e. presenting the discussion of the general trend with decreasing yields with decreasing depths somewhat less pronounced or more careful.

Figures:

The fluxes in the figures are given in $\text{mg m}^{-2} \text{d}^{-1}$. However in Fig. 8, the direct relation of both C and Si fluxes is given in $\text{mmol C (Si) m}^{-2} \text{d}^{-1}$. This makes it difficult to compare and understand the figures entirely. I would suggest including a molar scale in the Figs. 4-6 for better comparability.

Interactive comment on Biogeosciences Discussions, 2, 551, 2005.

BGD

2, S300–S301, 2005

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