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## ***Interactive comment on*** “External forcings, oceanographic processes and particle flux dynamics in Cap de Creus submarine canyon, NW Mediterranean Sea” *by* A. Rumín-Caparrós et al.

**A. Rumín-Caparrós et al.**

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Received and published: 12 March 2013

We sincerely thank Anonymous referee 1 for reviewing our manuscript and for his/her helpful comments. We have revised the manuscript considering each of the comments as follows:

1. *Sophisticated community models are available that can describe the processes considered here. The authors should at least mention this possibility and state why a modeling analysis has not been carried out.*

**Response:** This point has been corrected according to the reviewer’s suggestion. A sentence has been added to the text to mention that several numerical analyses have

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been carried out describing the physical processes discussed in this paper. Nonetheless, in this paper we focus on determining the atmospheric variables that govern sediment transport to the deep sea floor based on observational data, so numerical modeling is not needed.

2. *Classical bulk formulas use to estimate sensible and latent heat fluxes should be reported at the beginning of section.* 3.3. *To this respect, having in mind the great uncertainty in determining those estimates, using 5 significant digits to denote heat transfers is meaningless. For example, "14211 W/m<sup>2</sup>" should be rewritten "14.2x10<sup>3</sup> W/m<sup>2</sup>".*

**Response:** A new paragraph has been added to the text to include classical bulk formulas for latent and sensible heat fluxes. The heat flux units have been also corrected reducing the number of significant digits.

3. *The abstract must be substantially modified. The last paragraph (appropriately modified) should be moved at the beginning of the text. The main aims of the paper should be clearly stated. The location of the Cap de Creus canyon should be specified.*

**Response:** We have corrected and improved the abstract following the suggestions of the reviewer.

4. *At the end of the introduction a brief description of the paper structure should be added.*

**Response:** We really appreciate this comment, but we strongly believe that adding a brief description of the paper structure would make the introduction a bit lengthy.

5. *"GoI" should be defined the first time it is used.*

**Response:** Thank you for highlight this mistake, GoL has been defined the first time used.

6. *Reference to Fig. 3 should be made in the first two paragraphs of sect. 4.1.*

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**Response:** Thank you for highlight this mistake, a reference to Fig. 3 has been included in the first two paragraphs of section 4.1. Note that to fit this change, the order of the figures 2 and 3 has been switched.

7. *Line 13 of page 18581 should be rewritten.*

**Response:** The text has been rewritten following the suggestion of the reviewer.

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Interactive comment on Biogeosciences Discuss., 9, 18571, 2012.

**BGD**

9, C8936–C8938, 2013

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