

Interactive comment on “Interannual variability of surface and bottom sediment transport on the Laptev Sea shelf during summer” by C. Wegner et al.

Anonymous Referee #2

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General comments: This study of Wegener et al. describes the distribution of sediment in the Laptev Sea during two summers, 2007 and 2008. This distribution is discussed in relation to atmospheric forcing as well as its relation to observed nutrient distribution, where the latter indicate the spreading of river runoff. Based on these observations the sediment transport dynamics is deduced and discussed. Sediment dynamics in the Arctic Ocean, and especially the Siberian shelf seas, are very topical and of high value considering the environmental changes that have been observed during the last decade. The impact of an increase in sediment input to this region will likely have a positive feedback to the atmospheric CO₂ content. This manuscript is well written and has a clear message and is nicely suited for this journal. Hence I recommend

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publication but like the authors to consider a few minor issues.

Technical aspects: Page 13055. Line 2. Exchange “accelerating in the record minimum” to “accelerating to the record minimum” and also add year 2012 after 2007.

Page 13058. Line 17. It reads that “ADCP have gained increasing acceptance”, but the references are 13, 11 and 6 years old. I would delete the word “increasing”.

Page 13059. Line 19. It should be -20 °C, not °N. Line 20. Use unit micro moles per liter for silicate in the text as it has been used in the figures.

Page 13062. The description in the paragraph starting on line 11 is difficult to follow in Figure 4 when it comes to the details. Also I can not understand that the unit ml/l is used for oxygen. It was more than 30 years since micro moles/l was recommended by international geochemical programs.

Page 13065. Line 25. It would be nice to have the numbers of these current speeds.

Interactive comment on Biogeosciences Discuss., 9, 13053, 2012.

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