



Interactive comment on “Seasonal cycling of phosphorus in the southern bight of the North Sea” by C. van der Zee and L. Chou

Anonymous Referee #1

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Review of the paper “Seasonal cycling of phosphorus in the southern bight of the North Sea” by C. van der Zee and L. Chou

The paper “Seasonal cycling of phosphorus in the southern bight of the North Sea” by C. van der Zee and L. Chou investigates the phosphorus cycling in the coastal area of the southern North Sea. While for example the cycles of nitrogen and silica have been studied rather intensively during the last years, the role of the phosphorus biogeochemistry in the marine environment receives less attention. The paper by van der Zee and Chou thus adds an important contribution to the understanding of ecosystem functioning at the right time. The paper is based on a detailed reliable data set, and the corresponding conclusions provide new insight not only in the cycling of phosphorus, but also into the relation of the cycles of nitrogen and silica. I have no major concerns about the paper and think it deserves publication in BIOGEOSCIENCES after some

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minor revisions, which I have indicated below.

Minor comments:

Abstract In my view, the abstract gives too much information and details about the P-cycling and is lacking other information. For example Si and N have not been mentioned at all except for a short and seemingly rather general statement for Si and a rather surprising statement of DON at the end. Organic carbon is also not considered here, however its role in the paper is minor anyway (see below). I would thus recommend to fully rewrite the abstract highlighting the key findings regarding the P-cycle and its relation to Si and N in order to attract the reader and to report briefly, what to expect from the paper.

Methods and Results: To me the description of the organic carbon parameters in the methods section is not justified by their later consideration. I realize that POC is shown in one plot, but this is basically all. For DOC, not even the data have been shown and DOC seems to be totally irrelevant to the paper. I would thus recommend to entirely ignore these parameters or to substantially strengthen their role. Similar consideration might be applied to Chlorophyll a

Results, page 668, line 5: I guess November 2002 is meant here?

Figures: Fig. 2, 3, and 4 are almost impossible to read. If this should be the final layout and size for BIOGEOSCIENCES, they need to be redrawn with much higher clarity.

Interactive comment on Biogeosciences Discussions, 1, 681, 2004.

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1, S406–S407, 2004

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