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Interactive comment on "Amino acid composition and δ^{15}N of suspended matter in the Arabian Sea" *by* B. Gaye et al.

Anonymous Referee #1

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This manuscript evaluated distribution of amino acids in suspended particulate matter (SPM) collected by conventional sampling bottles and also by in situ filtration pumps and compared with that of sedimenting particles collecting by sediment traps. The major objectives were to assess ocean particle dynamics and organic matter degradation. Major findings of the study are SPM organic matter was relatively less degraded than sedimenting particles, amino acid composition differs in SPM and sedimenting particles, enrichment of glycine, serine and glutamic acid in SPM was due to sorption or coagulation and adsorption of dissolved organic matter, and SPM appears to exchange amino acids and nitrogen isotopes with the DOC pool. The paper is well written and I recommend it for publication. However, the authors need to address the following comments.

Abstract: Lines 29 -31 need rewriting

Introduction:

Lines 63-68: include here amino acid –C and N yields because they are important diagenetic indicators.

Lin3 73: delete '; '

Line 72: replace indexes with indices

Sampling:

Line: 123: Add year of sampling

Line 129: Replace 'concentration' with 'content'

Analysis:

Line 157: Add the name of the reagent was used to prepare amino acids derivatives.

Results

SPM and POC: Add SPM and POC data for in situ pump samples.

SPM and POC data for the trap samples may be provided

Nitrogen isotopes data for trap samples not given

Amino acids:

Line 186 and 187: Do you find relationship of amino acids with SPM and TPN

Methods used to calculate DI and RI need to be included in M & M section

No results for traps; in situ pumps presented.

Discussion

Line 197-200: SPM concentration and composition

It would be interesting to discuss the relationship of temperature and amino acids

Is it possible to have similar relationship between SST and TPN or SST and Amino acids?

Line 217: Gly and Ser generally not taken up by particles

Figures and Tables

Figure 2: It would be useful to show vertical profiles for amino acids.

Fig. 4. May be deleted and data can be given in the text.

Interactive comment on Biogeosciences Discuss., 10, 13317, 2013.