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Biogeosciences Discussions

Interactive comment on "Distribution and bacterial availability of dissolved neutral sugarsin the South East Pacific" *by* R. Sempéré et al.

Anonymous Referee #2

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The manuscript of Sempere et al. describes some sugar measurements in the south east pacific.

In the abstract, the authors mention that "total dissolved neutral sugar concentrations were higher in UPW and MAR than in GYR and EGY." In the summary and conclusion, the authors mention that "this study showed a diversity of total dissolved neutral sugar amounts in ... with relatively elevated concentrations in ... GYR and ...EGY.

I apologize for my unability to review a manuscript like this where the authors have problems to identify where they have found higher sugar concentrations. Although I may provide a few hints.

It seems like all sugar concentrations are similar, this may be a sign of a threshold.

However, the authors have no theoretical hypothesis why the sugar concentrations are on the level they were measured. To me it seems more a depth-dependence of the sugar concentrations than a dependence of the location.

The authors do not provide evidence that the radiation is in reality able to modify the sugars - is the DOM photodegradation real? Fig. 5 may be explained by light-harvesting organisms capable of storage formation and of leucin incorporation - no relation to DOM photodegradation. The variation in fig. 5 seems to be really high.

Although the authors report that a systematic, unknown peak coeluted with fructose and made its quantification impossible, the author claim that concentrations of fructose were very low.

Interactive comment on Biogeosciences Discuss., 5, 725, 2008.