



Interactive
Comment

Interactive comment on “Glyoxal and methylglyoxal in Atlantic seawater and marine aerosol particles: method development and first application during the Polarstern cruise ANT XXVII/4” by M. van Pinxteren and H. Herrmann

x. Pang (Referee)

pangxbyuanj@gmail.com

Received and published: 1 August 2013

In the paper the authors report GLY and MGLY concentrations on Atlantic aerosol particles and the seawater. This is an interesting work for atmospheric scientists since GLY and MGLY play important roles in atmospheric chemistry. There are two issues which the authors may pay more attention to revising. Firstly, the scientific significance of the paper is not expressed in the introduction. We cannot know why the authors conducted this campaign work. If just to know the concentration of GLY and MGLY in the seawater

Full Screen / Esc

Printer-friendly Version

Interactive Discussion

Discussion Paper



and in sea ambient air, the significance is not enough. Secondly, the conclusion based on the correlations between dicarbonyl concentrations in aerosol and in seawater is doubtful or at least not plausible since the sampling sites were different. So the section of '3.3.3' may be deleted or rewritten.

The following are some detailed comments. Line 23-24 page 15302, why not the interaction of MGLY? Line 3 page 15303, this reference is old and cannot imply the current situation. Line 6-15 page 15305, the environmental significance of the paper is not clearly expressed. 3.1 and 3.2 sections can be put into experimental section other than 'results and discussion'. Line 17 page 15311, give the complete name for the abbreviated name of 'chl a'. Section of 'GLY/MGLY concentrations on aerosol particles' page 15313, the authors are suggested to use a table to list the aerosol GLY and MGLY concentrations other than text description. Line 17 page 15314, give the completed name of DOC. Line 7-8 page 15316, Can the authors explain how the biological activity act as a sink for GLY and MGLY? Line 15-16 page 15316, this sentence is confusing in grammar and rewrite it. Line 18-21 page 15316, the scientific significances of correlation between a-dicarbonyls in the SML and in aerosol are doubtful. Line 26-28 page 15316, this sentence looks useless in the context. Line 7-8 page 15317, the conclusion is doubtful based on the above phenomenon.

Table 1, what is the 'local sampling time'? for seawater sampling or for aerosol sampling? More detailed sampling time should be given in the table. Table 2, the caption is too simply to readers. More detailed information on description of data should be added. Table 3, the abbreviated names are confusing to the readers and the completed names should be given. Fig 4, the symbols such as 'Ox' and 'CHL A' are not consistent with the description in text and unit such as C is not right.

Interactive comment on Atmos. Chem. Phys. Discuss., 13, 15301, 2013.

[Full Screen / Esc](#)[Printer-friendly Version](#)[Interactive Discussion](#)[Discussion Paper](#)