

Interactive comment on “Acrylic acid and related dimethylated sulfur compounds in the Bohai and Yellow Seas during summer and winter” by Xi Wu et al.

Anonymous Referee #1

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Review of BG-2019-172 by Wu et al. This paper describes the DMS/P and AA surface ocean cycling in the Bohai and Yellow Seas during winter and summer. The authors also measured depth profiles and porewater concentrations, as well as performed incubation experiments to derive production/degradation rates. This paper contains valuable data, but only a small amount of new science. By now, the community has a generally good understanding of DMS dynamics and the controlling factors. We know that phytoplankton, bacteria, and environmental parameters influence DMS/P cycling (and related compounds). Nonetheless, it appears that the authors did not measure phytoplankton or bacterial parameters. They attempt to explain processes without measuring the parameters involved. This paper is generally more suited to a journal like ESSD.

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Specific comments: The English throughout the entire manuscript needs to be slightly revised. Overall, the language is fine, but there are still many mistakes. Section 2.3 Were there particulate measurements of anything (no filtering to measure total DMS/P, etc.)? Did you measure duplicates or triplicates? How exactly was precision and the limit of detection determined? Section 2/3 Were nutrients measured? Phytoplankton pigments or flow cytometry? Section 3.5 Were bacterial parameters measured? Why not? Did you see evidence of first order rates? Did you discover something new with the incubation experiments?

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