

Egusphere-2022-499: **DMS cycling in the Sea Surface Microlayer in the South West Pacific: 1. Enrichment potential determined using a novel sampler**

Answers to reviewer 1

The authors would like to thank anonymous reviewer 1 for the very positive review provided. The answers to the comments are provided in blue below.

Comment 1: Sections ‘2.6 DMS air-sea flux calculation’ and ‘3.5 Air-sea flux’: DMS concentrations in the SML were determined using the gas-permeable tube, the plate and the sipper techniques. Thus, DMS air-sea flux estimates can be obtained using DMS concentrations from three different sampling methods. Please point out detailed DMS concentrations which were used in DMS air-sea flux calculation. DMS measurements with the gas-permeable tube, or with the plate, or with the sipper?

Answer: L202-203 regarding the sampler used for SML DMS air-sea flux “ F_{SML} corresponds to DMS air-sea flux calculated using SML DMS concentration obtained with the gas-permeable tube”, and in Table 4 caption.

Comment 2: Section ‘3.4 Correlations between variables’: I thought DMS measurements with the plate, or with the sipper, were used to the Pearson test. Please point out it clearly. Moreover, a novel gas-permeable tube technique approach gave accurate measurements of DMS concentrations in the SML. Why did not choose DMS measurements with the gas-permeable in the SML to analyze correlations between variables?

Answer: In the Table 4 caption, a sentence was added regarding the sampler used for SML DMS concentration “SML DMS was sampled with the gas-permeable tube”, and in the text L302-303 “The SML DMS concentration presented in this section was obtained from the gas-permeable tube and was not normally distributed.”