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Dimethylated sulfur compounds in the Peruvian upwelling system

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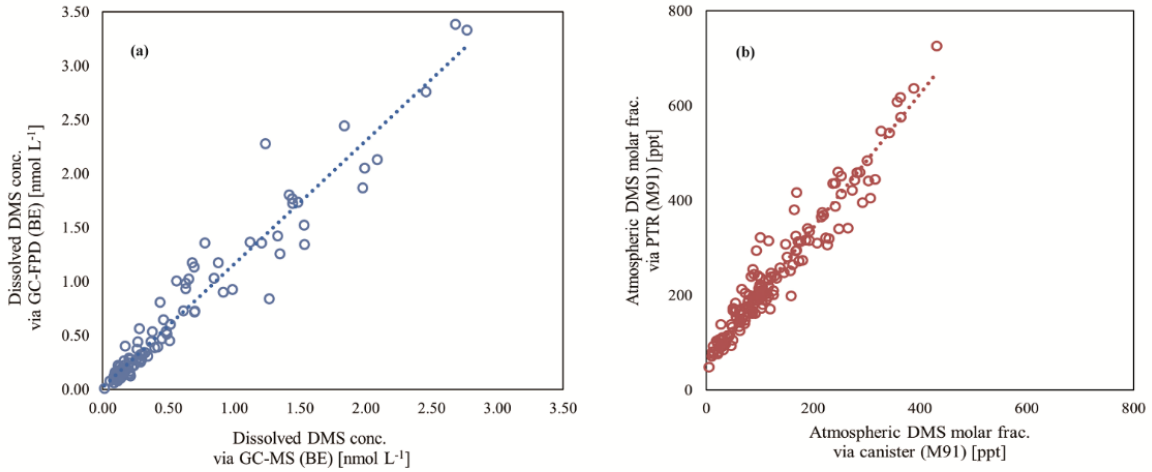

Figure S1: (a): Dissolved DMS conc. via GC-MS (BE) vs. dissolved DMS conc. via GC-FPD (BE): y = 1.14x + 0.02, r^2 = 0.94, n = 121. (b): Atmospheric DMS molar fractions via PTR (M91) vs. atmospheric DMS molar fractions via the canister (M91): y = 1.43x + 59.87, r^2 = 0.93, n = 155. Atmospheric DMS data via PTR were averaged over the filling time of those via the canister and included two min prior and two minutes post filling. As stated in the main text, the two atmospheric measurements were well correlated but not exactly on the 1:1 line (Fig. S1b). The PTR measurements were slightly higher than the GC measurements. This was not tested in the laboratory, but there might be some potential reasons for the discrepancy between the two instruments. For instance, the canisters can experience loss during storage, leading to lower values, and the PTR cannot distinguish between compounds at the same mass, leading to potentially higher values. In addition, it is possible that some issues occurred with the calibration and standardization which applied in one or both techniques and, therefore, led to the discrepancy between the two instruments. The latter is the most likely explanation, as the loss/artifact explanation would be unlikely to produce the good correlation between the methods. However, considering the exact reasoning cannot be addressed at this late stage, we proceed as outlined in the main text.

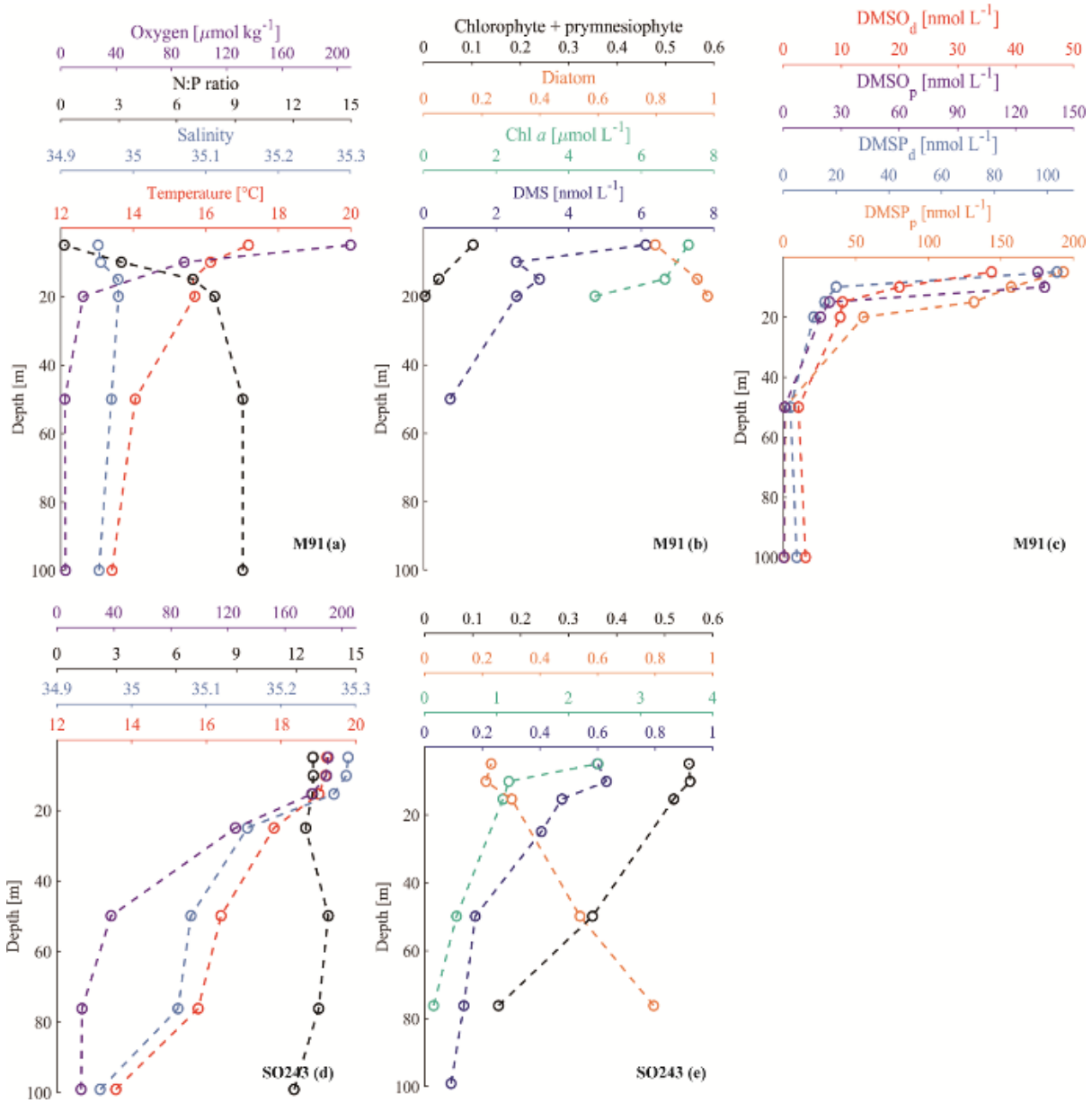

Figure S2. Selected depth profiles of temperature, salinity, N:P ratio, oxygen, Chl *a*, relative abundance of phytoplankton groups (diatom, sum of chlorophyte and prymnesiophytes) and DMS, as well as other sulfur compounds (only M91) such as $DMSP_p$, $DMSP_d$, $DMSO_p$ and $DMSO_d$ at the geographically similar shelf stations F4 and 11 in December 2012 (a–c) and October 2015 (d and e), respectively.