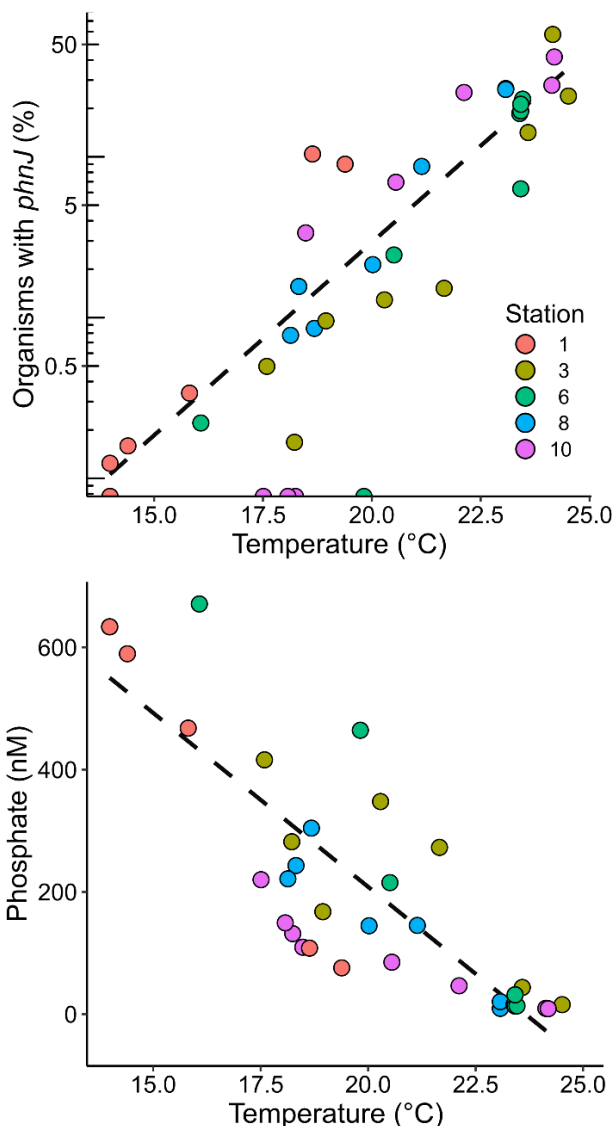


## Supporting Information

### Phosphonate cycling supports methane and ethylene supersaturation in the phosphate-depleted western North Atlantic Ocean

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**Figure S1.** C-P lyase gene abundance and phosphate concentrations vs. temperature in the western North Atlantic Ocean. The abundance of the C-P lyase gene is expressed as the percentage of organisms possessing a copy of *phnJ* and was calculated for a subset of metagenomes of GEOTRACES Section GA03 (Fig. 1; Table S1). Data are color-coded by station. GA03 Station 4 was omitted from the analysis because high-sensitivity, low level phosphate measurements were not available. Phosphate concentrations corresponding to the sampling depth of each metagenome were predicted by linear interpolation in each station profile because the latter did not always match exactly the depths at which seawater samples were collected for nutrient analysis. The dashed lines depict simple linear regression models.