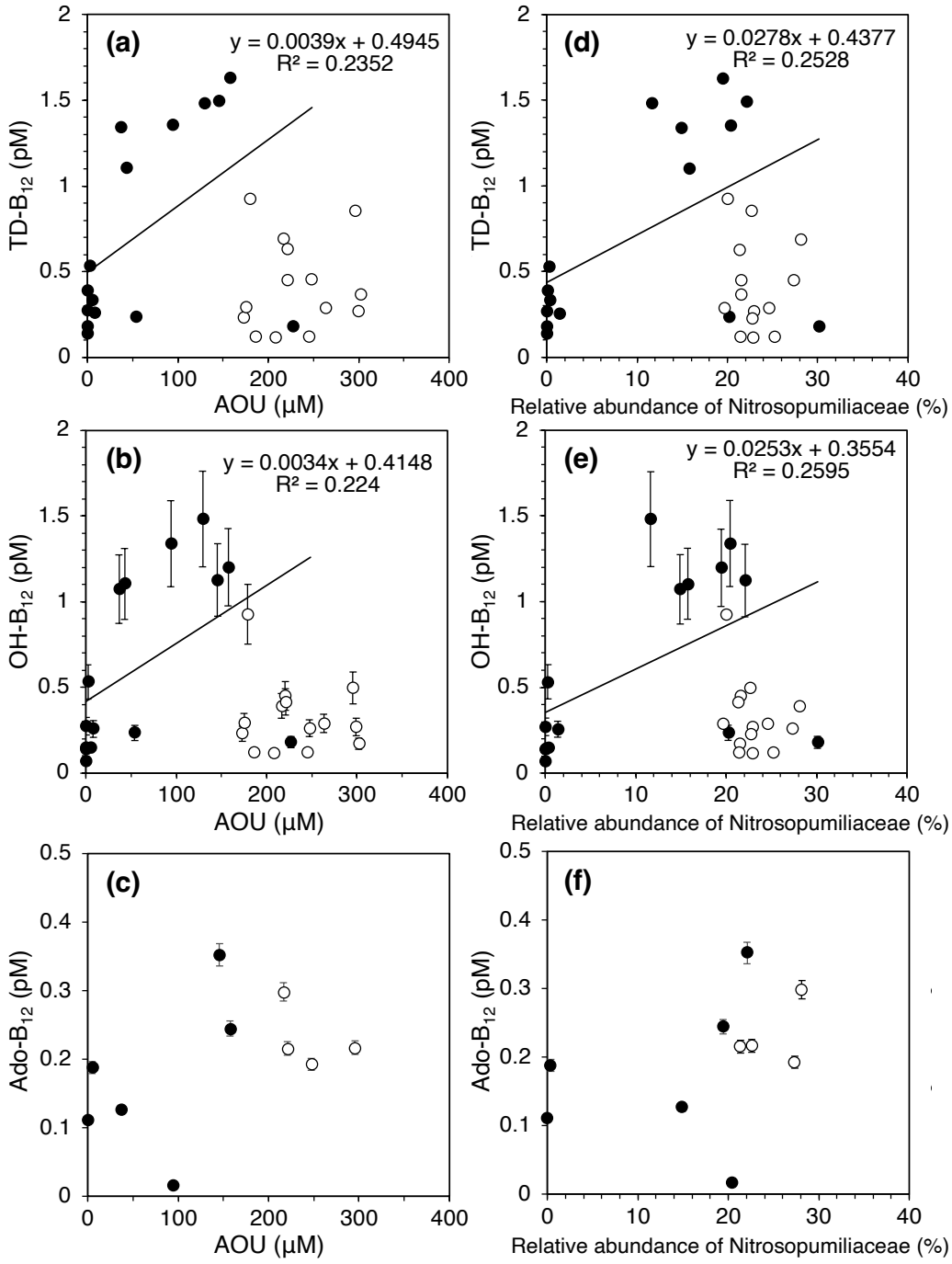


Figure 6: Relationships of dissolved cobalamin with AOU and the relative abundance of Nitrosopumiliaceae determined by 16S rRNA gene amplicon sequencing in the western North Pacific. Relationships of TD-B_{12} (a, d), OH-B_{12} (b, e), and Ado-B_{12} (c, f) with AOU (a-c) and Nitrosopumiliaceae (d-f) are shown. Closed and open circles indicate the samples from the surface to the upper NPIW and from the lower NPIW and deeper waters, respectively. Solid lines indicate linear regressions for samples from the surface to the upper NPIW. Error bars in (b), (c), (e), and (f) represent propagated uncertainties associated with the standard deviations of the recovery rate. Non-detected (ND) values were excluded from the correlation and regression lines.

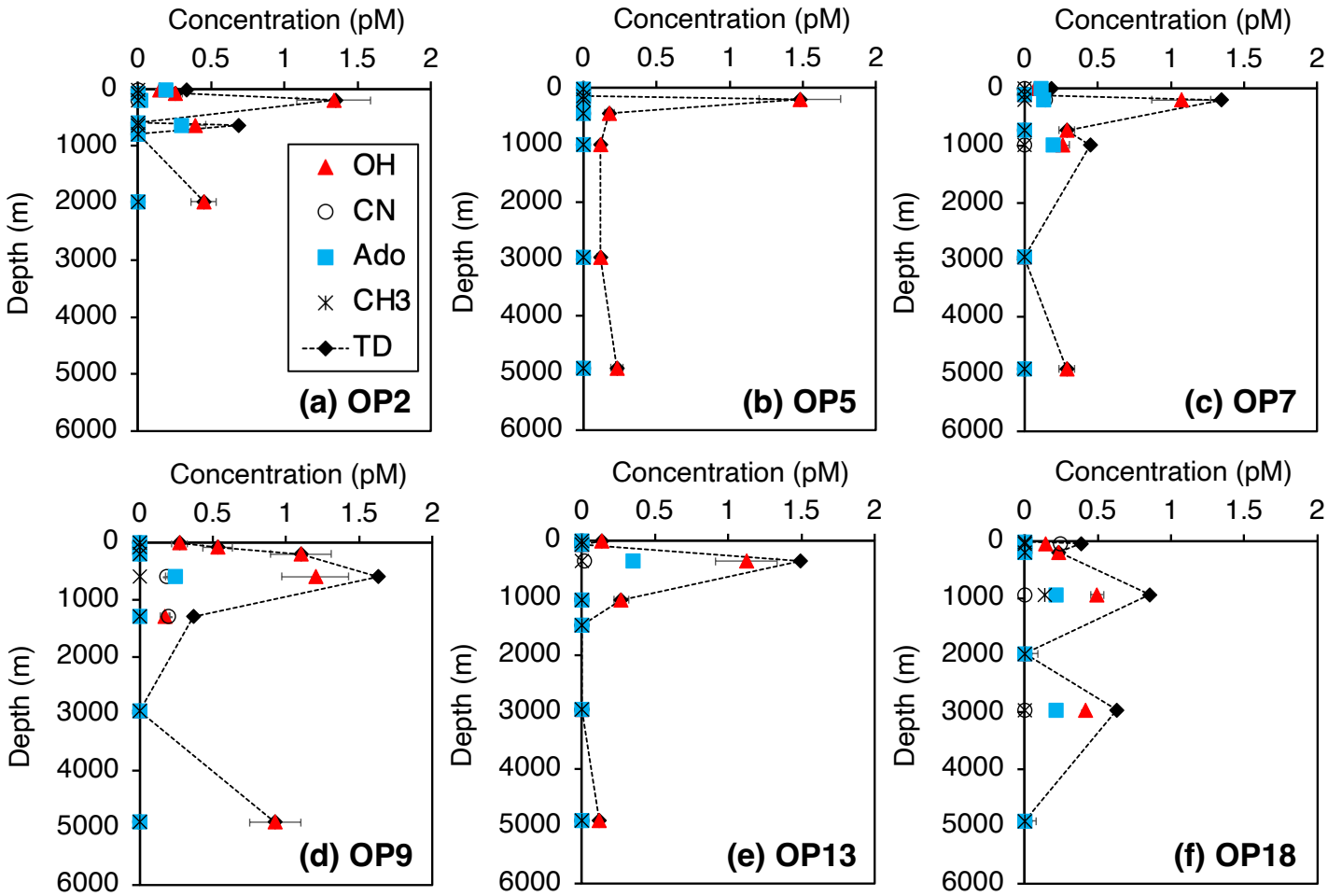


Figure A1. Vertical profiles of dissolved cobalamin concentrations at six stations: (a) OP2, (b) OP5, (c) OP7, (d) OP9, (e) OP13 and (f) OP18. Error bars in each cobalamin species except for TD-B_{12} represent propagated uncertainties associated with the standard deviations of the recovery rate. Samples in which a given cobalamin species was not detected (ND) are plotted at the 0 pM for visualization purposes only.