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Influence of mesoscale eddies on the distribution of nitrous oxide in the eastern tropical South Pacific

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Supplement

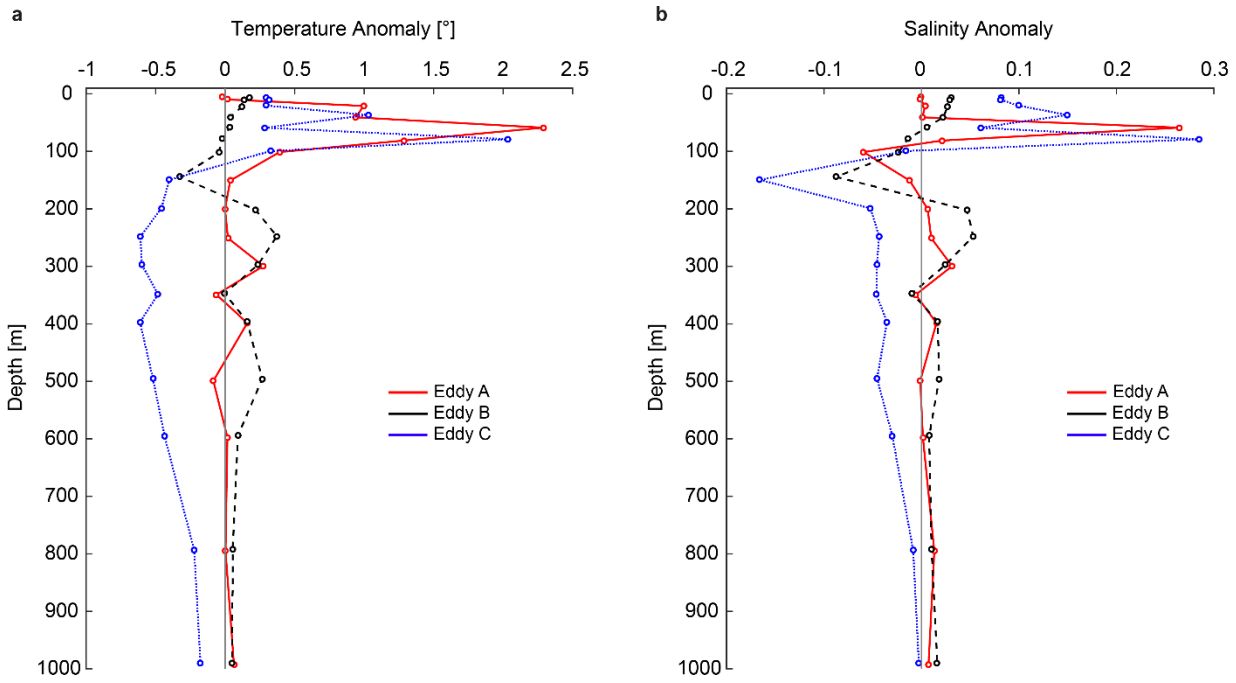

Figure S1. Temperature (a) and salinity (b) core anomalies (for definition see main text) from selected depth profiles across the mode water eddies A (red lines), B (black lines), and the cyclonic eddy C (blue lines) during the M90 cruise in November 2012. The name and location of the sampling stations used to compute the anomalies is indicated in Figs. 1 and 3 of the main text.

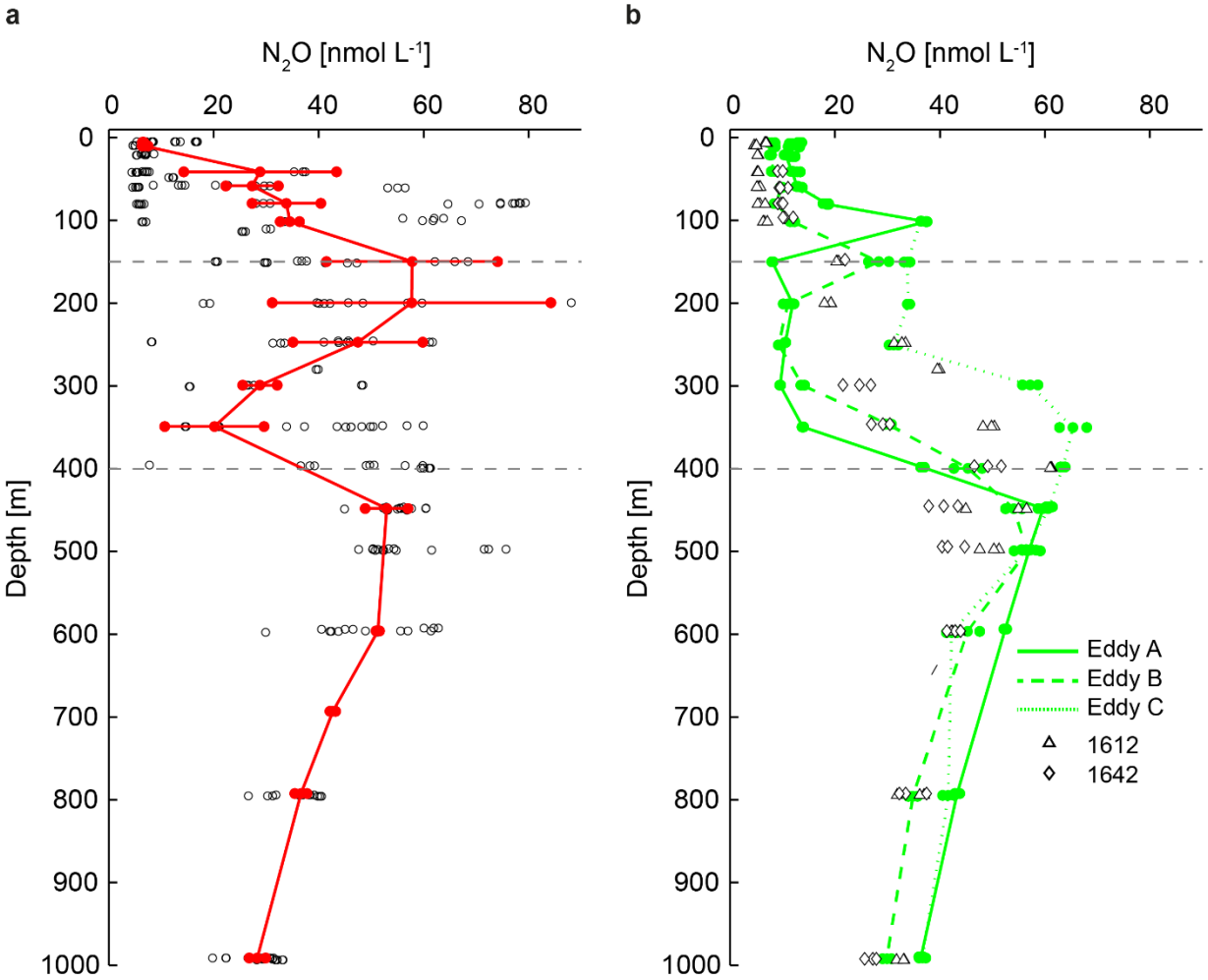

Figure S2. Comparison of N_2O distribution within the center of the eddies and background conditions in the ETSP. In (a), the N_2O concentrations from stations along the 86°W section (6°S – 16°S; black circles) which were used to compute a mean open ocean profile (red lines/circles) are shown. The red horizontal lines and dots in (a) indicate the standard deviation from the mean profile (data from Kock et al. (2016)). In (b) the N_2O concentrations of stations at the center of eddies A, B, and C, as well as from stations 1612 (△) and 1642 (◊) (cf. Fig. 1) are shown. The grey dashed lines in (a) and (b) indicate the depth range of the OMZ core (waters with $O_2 < 5$ µmol L^{-1}).

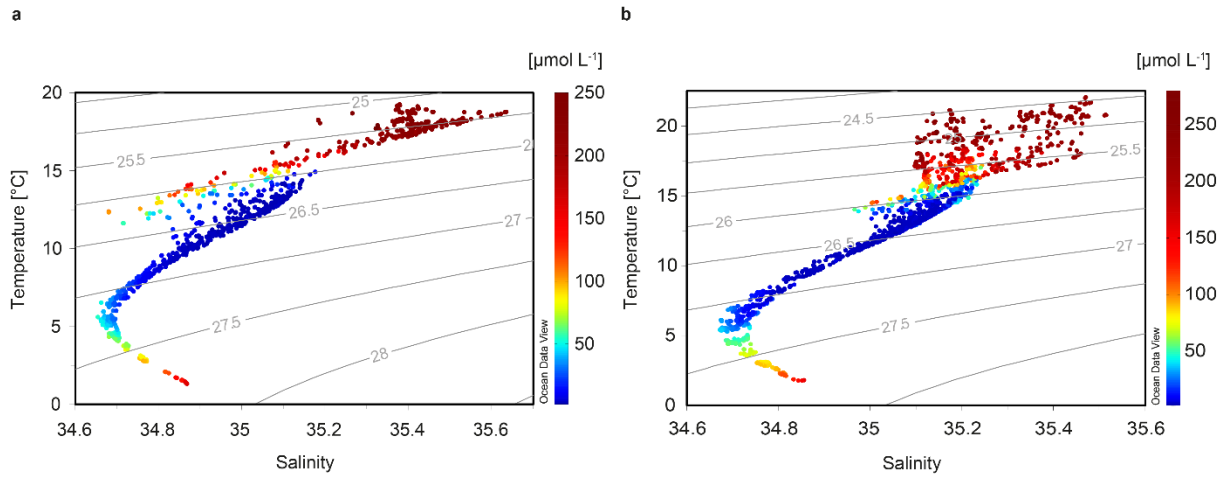

Figure S3. T-S diagrams from stations between about 15°S – 18°S and 86°W – 75°W (cf. Fig. 1) during the M90 (a) and M91 (b) cruises in December-November 2012. The color code corresponds to the measured O_2 concentrations.