Fig. 1. The location of the sampling stations in Hong Kong waters. These 12 stations are the same as the EPD stations. They represent a gradient from western eutrophic waters (NW2) to eastern waters with much lower nutrients (MM8).
Fig. 2. Monthly average salinity and temperature at the surface and bottom at 5 stations from 1986-2001. Vertical bars indicate ±1 SD. (Data from EPD, Hong Kong).
Fig. 3. Monthly average NO$_3$ and SiO$_4$ at the surface and bottom at 5 stations from 1986-2001. Vertical bars indicate ±1 SD. Note the different concentration scale for different stations. (Data from EPD, Hong Kong).
Fig. 4. Monthly average NH₄ and PO₄ at the surface and bottom at 5 stations from 1986-2001. Vertical bars indicate ±1 SD. Note the different concentration scale for different stations. (Data from EPD, Hong Kong).
Fig. 5. Monthly average TIN (=NO$_3$+NH$_4$+NO$_2$) e surface and bottom at 5 stations from 1986-2001. Vertical bars indicate ±1 SD. Note the different concentration scale for different stations. (Data from EPD, Hong Kong).
Fig. 6. Monthly average N:P and Si:P ratios at the surface and bottom at 5 stations from 1986-2001. Vertical bars indicate ±1 SD. The horizontal dashed line indicates the Redfield ratios of 16:1 for N:P and Si:P. (Data from EPD, Hong Kong).
Fig. 7. Monthly average N:Si ratios and suspended solids (SS) at the surface and bottom at 5 stations from 1986-2001. Vertical bars indicate ±1 SD. The horizontal dashed line indicates a Redfield N:Si ratio of 1:1. (Data from EPD, Hong Kong).
Fig. 8. Scatter diagrams of atomic nutrient ratios for the surface water during spring (Δ, Mar to May), summer (□, Jun to Aug), autumn (●, Sep to Nov) and winter (○, Dec to Feb); N, P and Si represent dissolved inorganic N, P, and Si. Stoichiometric (= potential) limitation for N, P, and Si is indicated by the number of data points in the various quadrants (Data from EPD, Hong Kong).
Fig. 9. Potential (%) N, P or Si limitation determined from plots in Fig. 8 for surface waters during spring (March to May), summer (June to August), autumn (September to November) and winter (December to February) at five stations in Hong Kong Waters from 1986 to 2001 (Data from EPD, Hong Kong).
Fig. 10. Concentrations of NO$_3$ and SiO$_4$ versus salinity for the surface data for five stations from the time series from 1986 to 2001. The graphs with lines indicate a significant correlation between the two variables and the correlation coefficients are represented by $r$. The intercept of the regression line is represented by $b$ (Data from EPD, Hong Kong).
Fig. 11. Intercept concentrations of \( \text{NO}_3 \) and \( \text{SiO}_4 \) at surface at NM2 from 1986 to 2001. \( p_{\text{NO}_3} < 0.05 \) and \( p_{\text{SiO}_4} > 0.05 \), indicates that the correlation is significant for \( \text{NO}_3 \), not \( \text{SiO}_4 \) at the 0.05 level (2-tailed test) (Data from EPD, Hong Kong).
Fig. 12. NH$_4$ versus PO$_4$ at VM5 for the surface concentrations from the time series from 1986-2001. The regression equation of NH$_4$ to PO$_4$ and the correlation coefficients r are given. (Data from EPD, Hong Kong).
Fig. 13. Chl a concentration versus nutrients (TIN, NH₄, PO₄ and SiO₄) at VM5 for the surface data from the time series from 1986-2001 (Data from EPD, Hong Kong). The regression equation of NH₄ to PO₄ and the correlation coefficients r are given.
Fig. 14. Monthly average Chl $a$ versus monthly average suspended solids (SS) for the surface data at NM2 and VM5. The correlation coefficients, $r$, are given (Data from EPD, Hong Kong).