

Fig. S3. Latitudinal gradients in PM₁₀ median concentration for the eighty-six cities in different seasons. The latitudinal gradient (north to south decrease) of PM₁₀ levels in mid-eastern China (longitude 100°E to 130°E) was illustrated by significant linear fittings ($p < 0.0001$ significance) of PM₁₀ median concentration with latitude of the cities. These linear regressions did reveal that there were lower PM₁₀ levels in the southern cities than in the middle or northern cities. The slope of these fittings was the largest in winter, more than twofold those in summer and autumn, indicating larger north to south PM₁₀ gradient in winter.

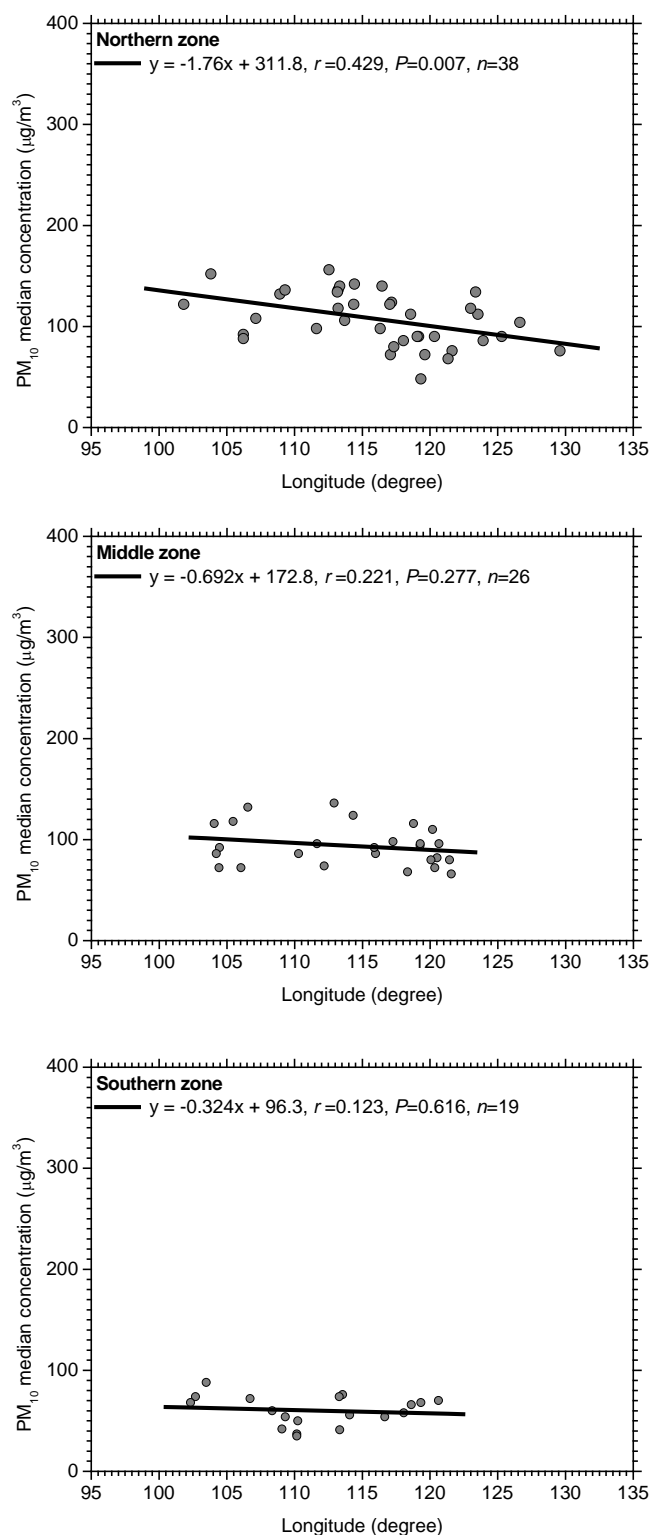


Fig. S4. Longitudinal gradients in PM₁₀ median concentration for (top) the thirty-eight cities in the northern zone, (middle) the twenty-six cities in the middle zone, and (bottom) the nineteen cities in the southern zone. Linear fitting of PM₁₀ median concentration with longitude was significant ($p < 0.01$ significance) for the thirty-eight northern cities (top). While for the cities in the middle zone (middle) and the southern zone (bottom), PM₁₀ concentrations also generally exhibited a decreasing trend from west to east, but the longitudinal differences in those cases were smaller and linear fittings of PM₁₀ concentrations with longitudes were not significant (not passed the 95% confidence level test) for these cities.