FIGURES FOR:

Seasonal and diurnal variations of particulate nitrate and organic matter in the Central European atmospheric aerosol

L. Poulain [1], G. Spindler [1], W. Birmili [1], C. Plass-Dülmer[2], A. Wiedensohler [1], H. Herrmann [1]

[1]{Leibniz-Institut für Troposphärenforschung (IfT), Leipzig, Germany}

[2]{German Weather Service, Hohenpeissenberg, Germany}

Correspondence to: H. Herrmann (herrmann@tropos.de)

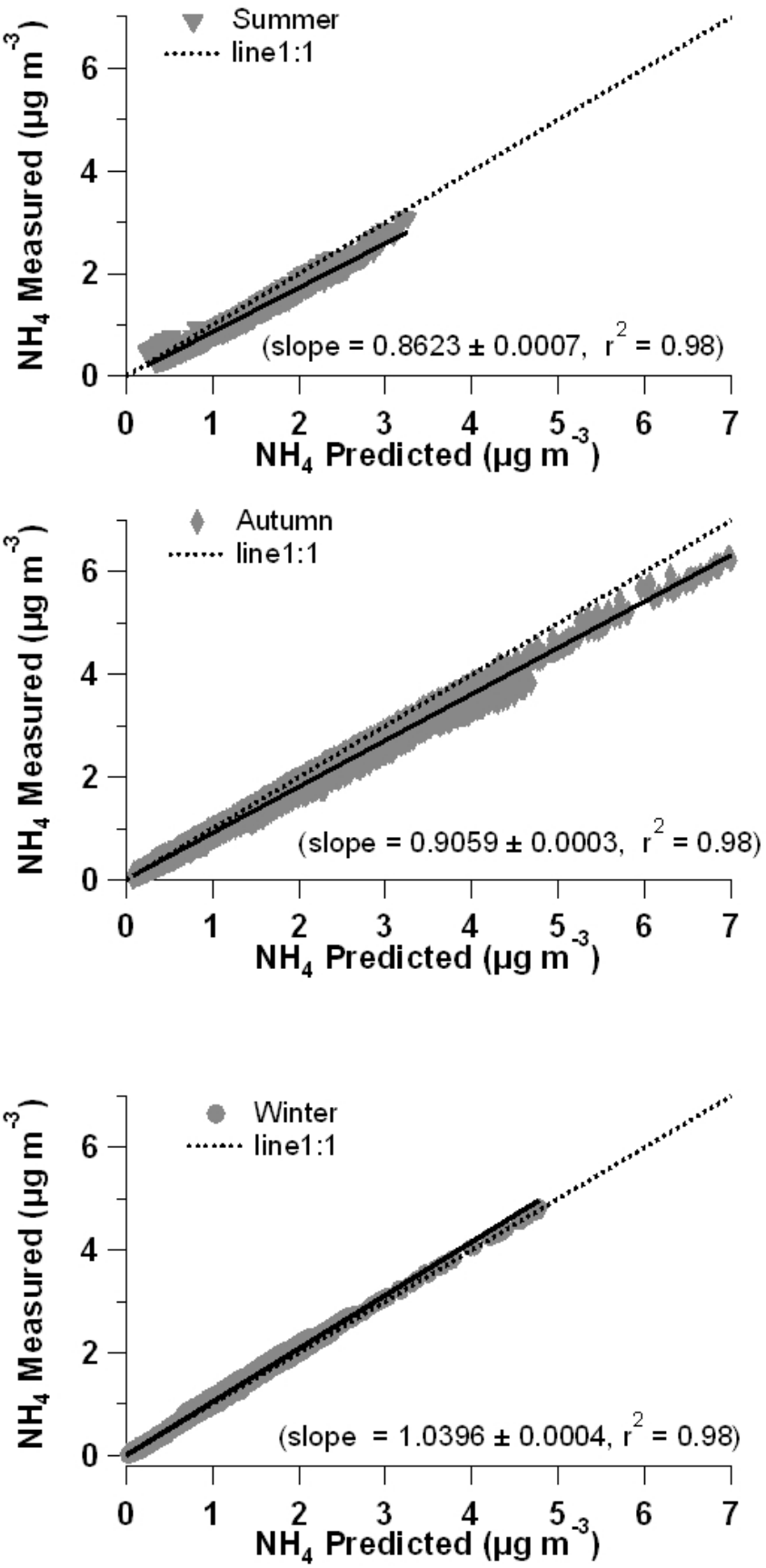

Fig. 1. Comparison of the measured ammonium with the predicted ammonium concentration assuming a fully neutralization by nitrate, sulphate and chloride for the three different campaigns.

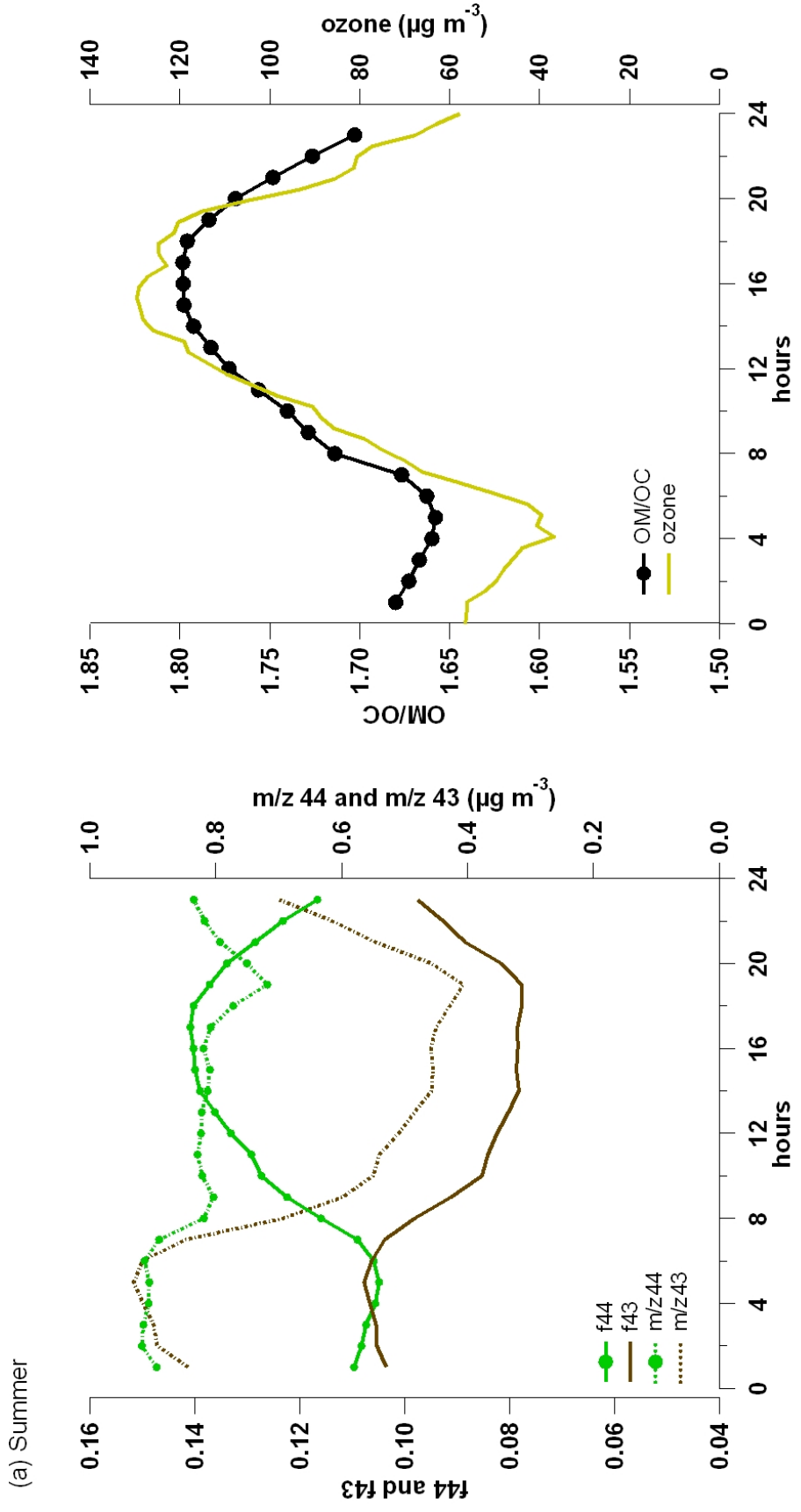

Fig.2. Diurnal variations of the organic aerosol tracers (m/z 44, m/z 43, f44, f43), OM/OC ratio and ozone concentration for (a) summer, (b) autumn and (c) winter

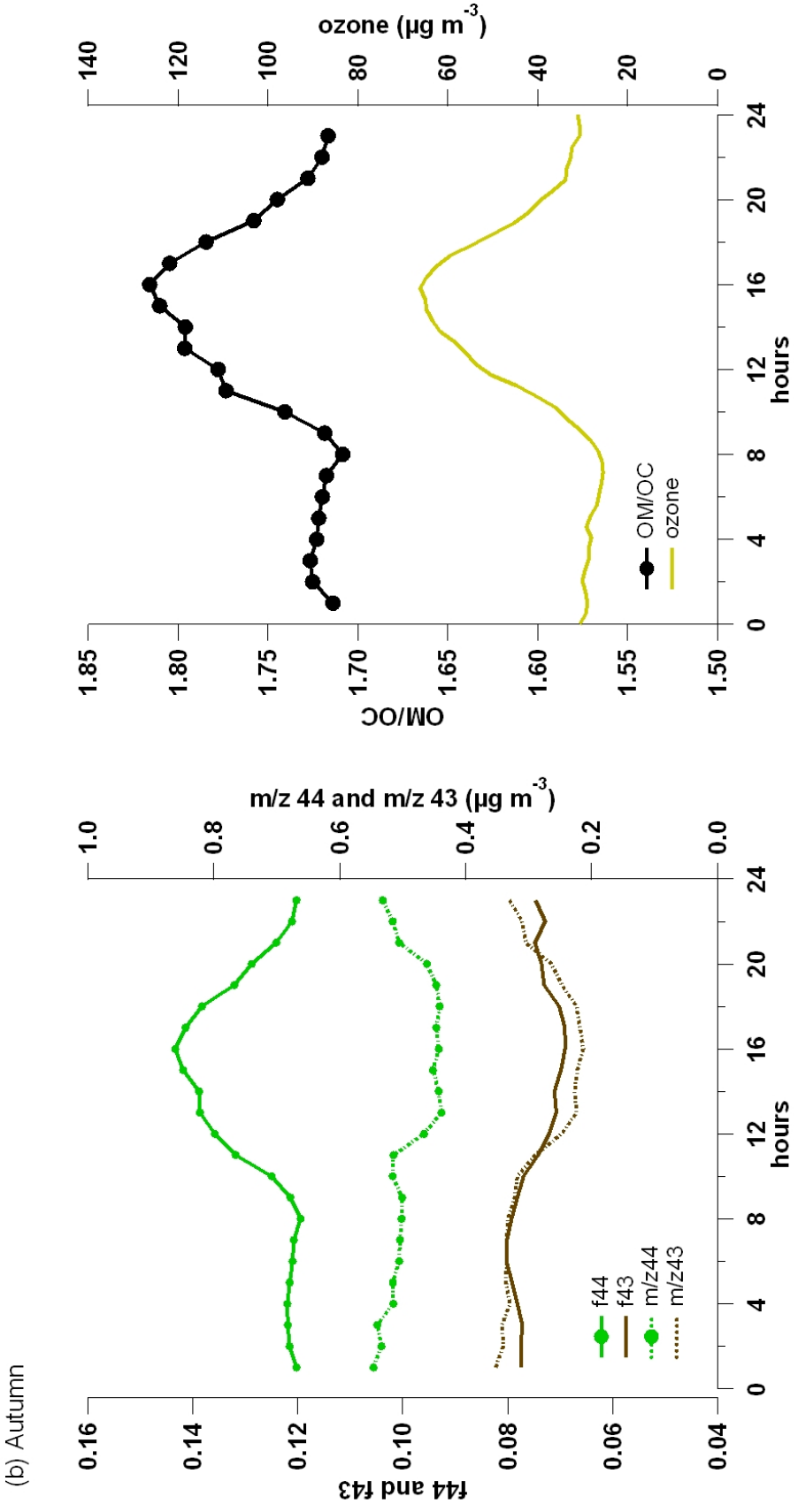

Fig.2. (continued)

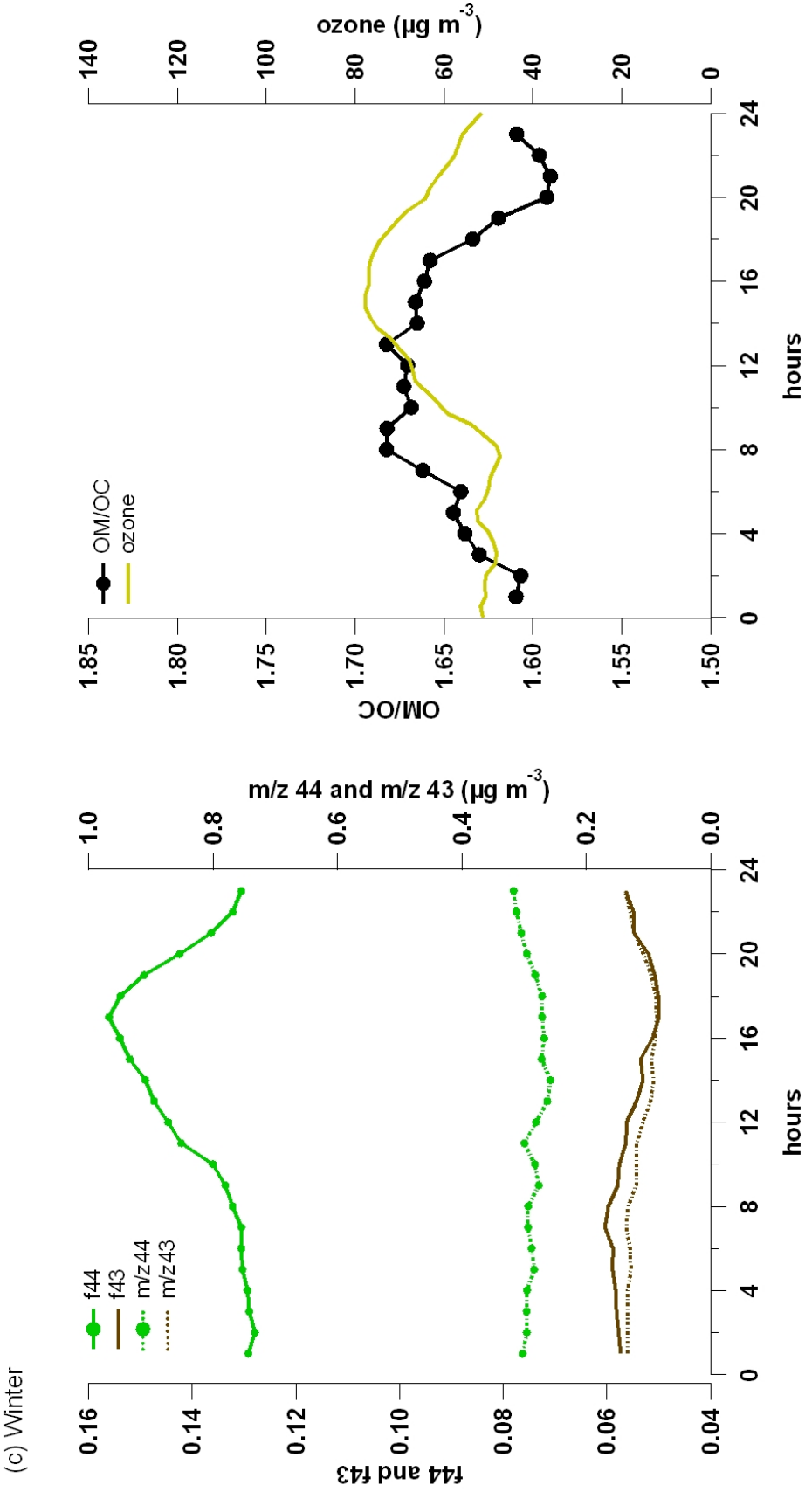

Fig.2. (continued)

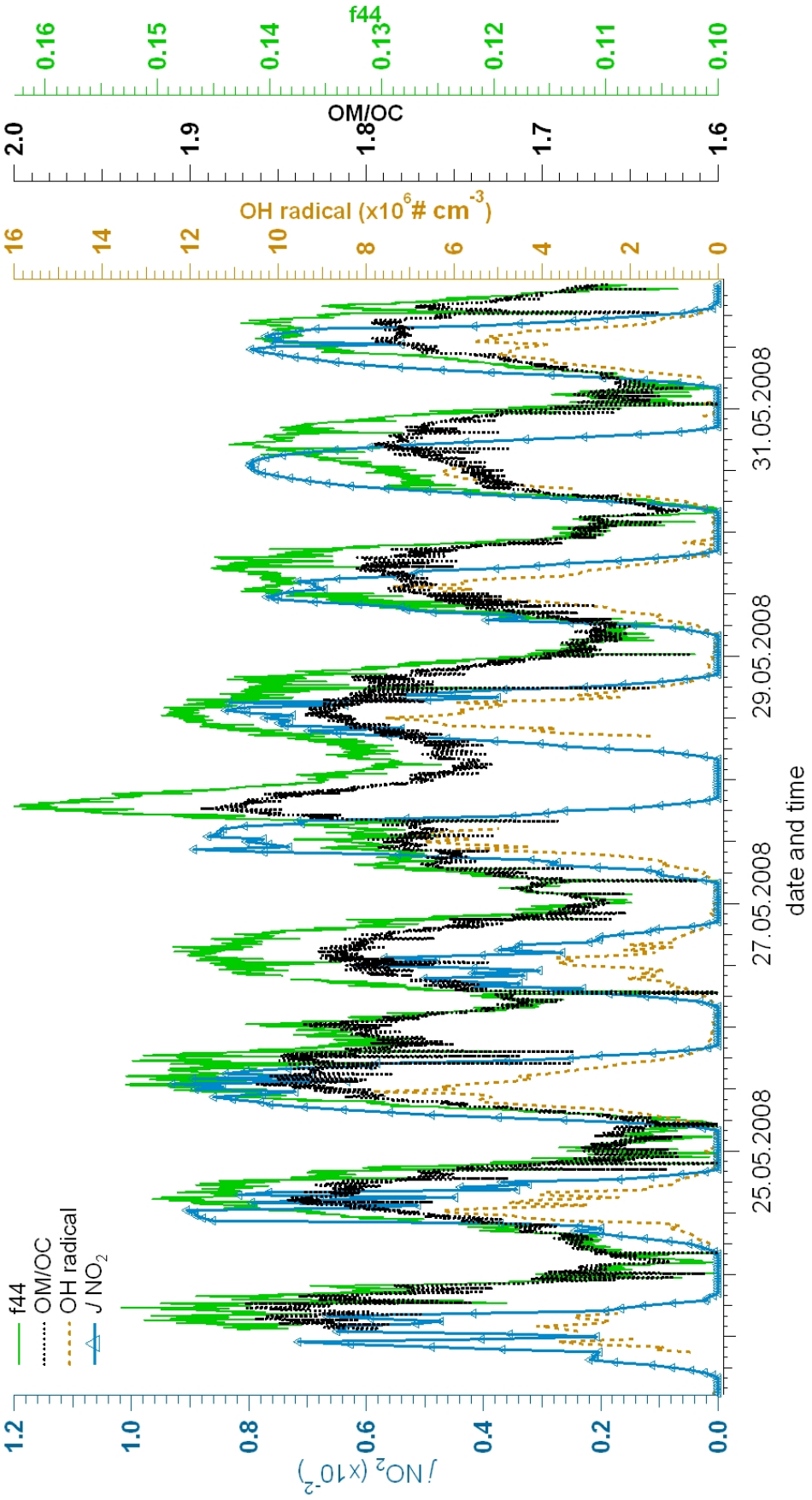

Fig. 3. Comparison of the f44 and OM/OC time series with the OH radical concentration and NO_2 photolysis rate for the summer campaign.

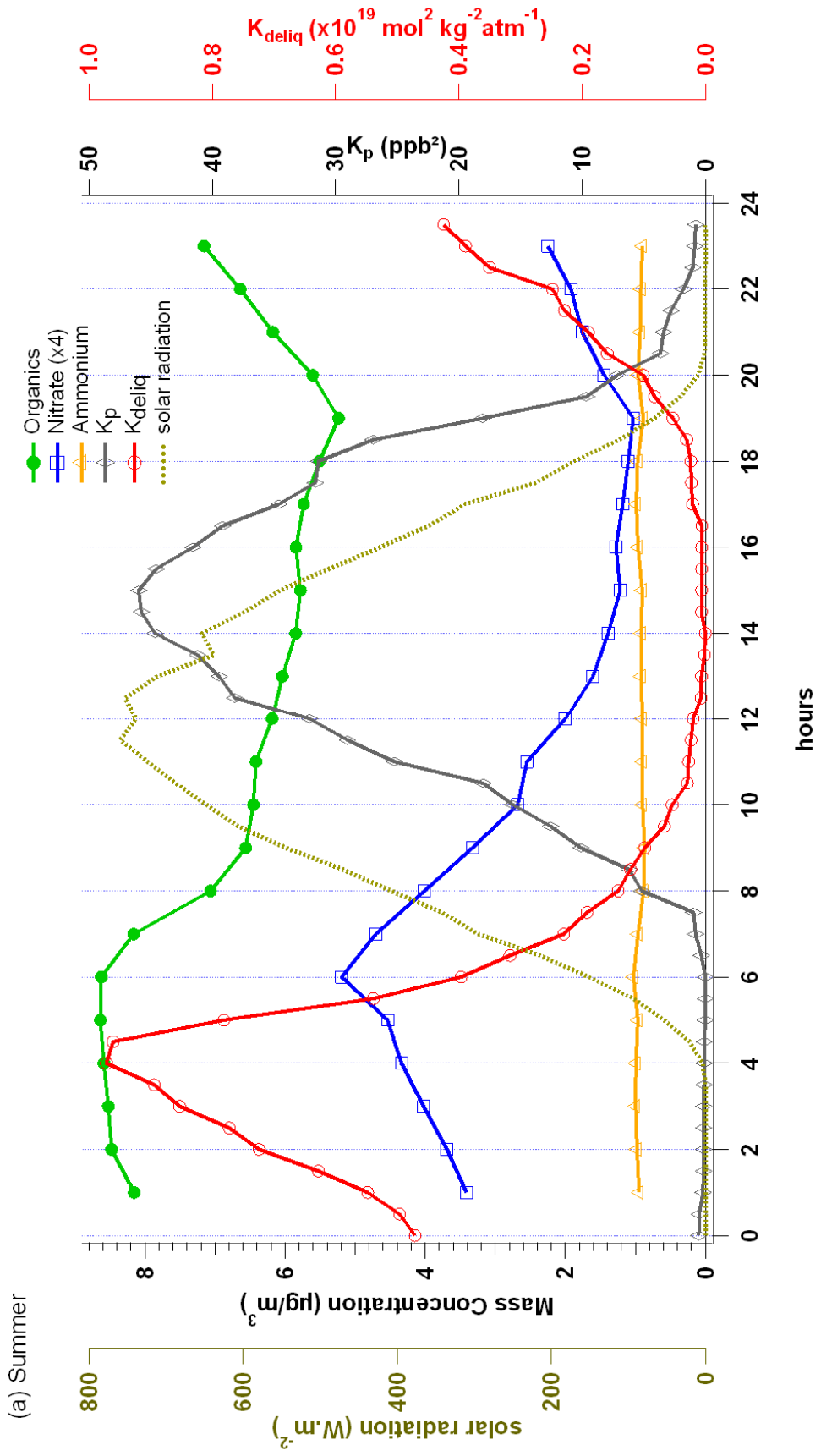

Fig. 4. Diurnal variations of the nitrate concentration and its thermodynamic constants for (a) summer, (b) autumn and (c) winter.

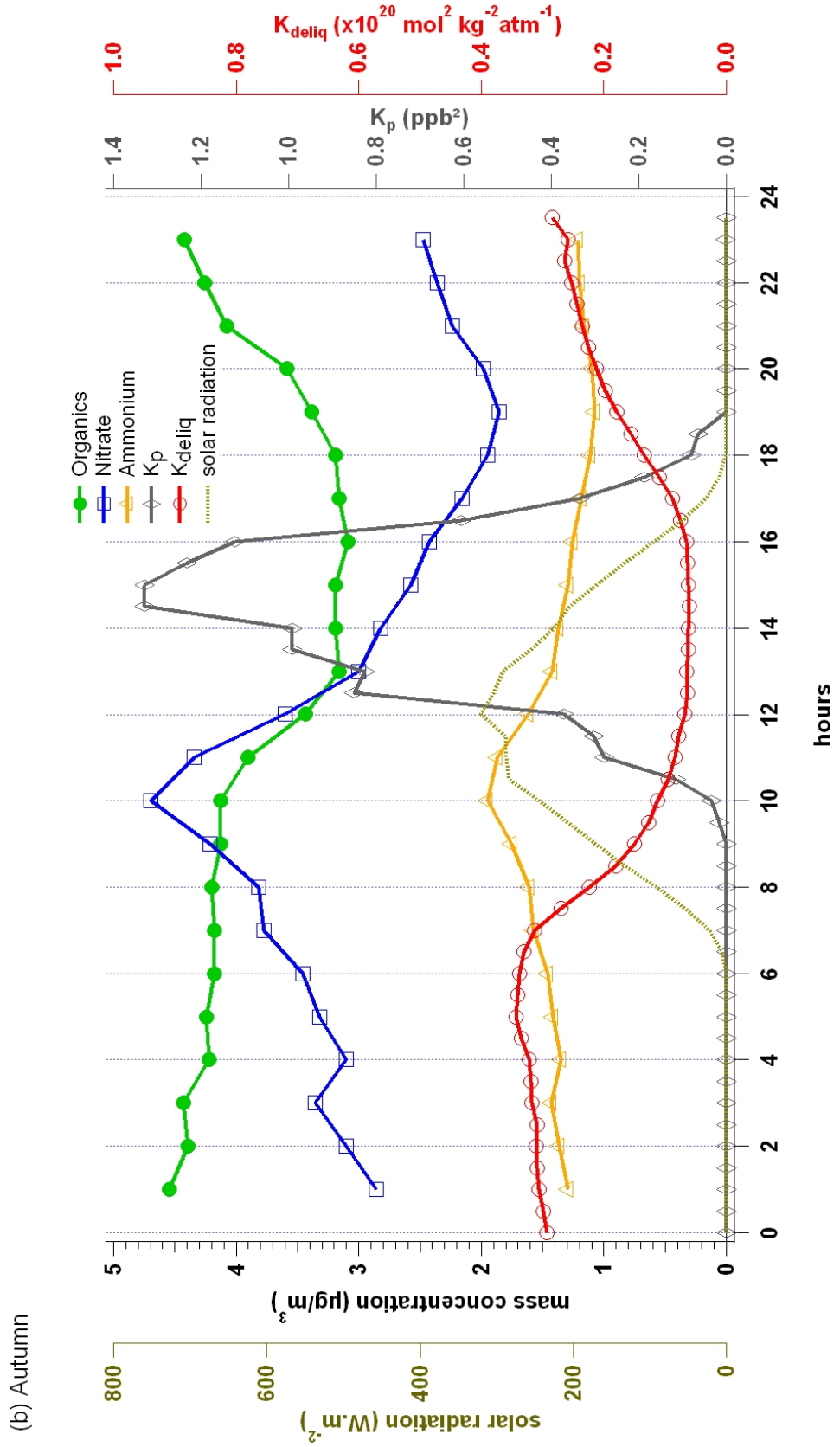

Fig. 4. (continued)

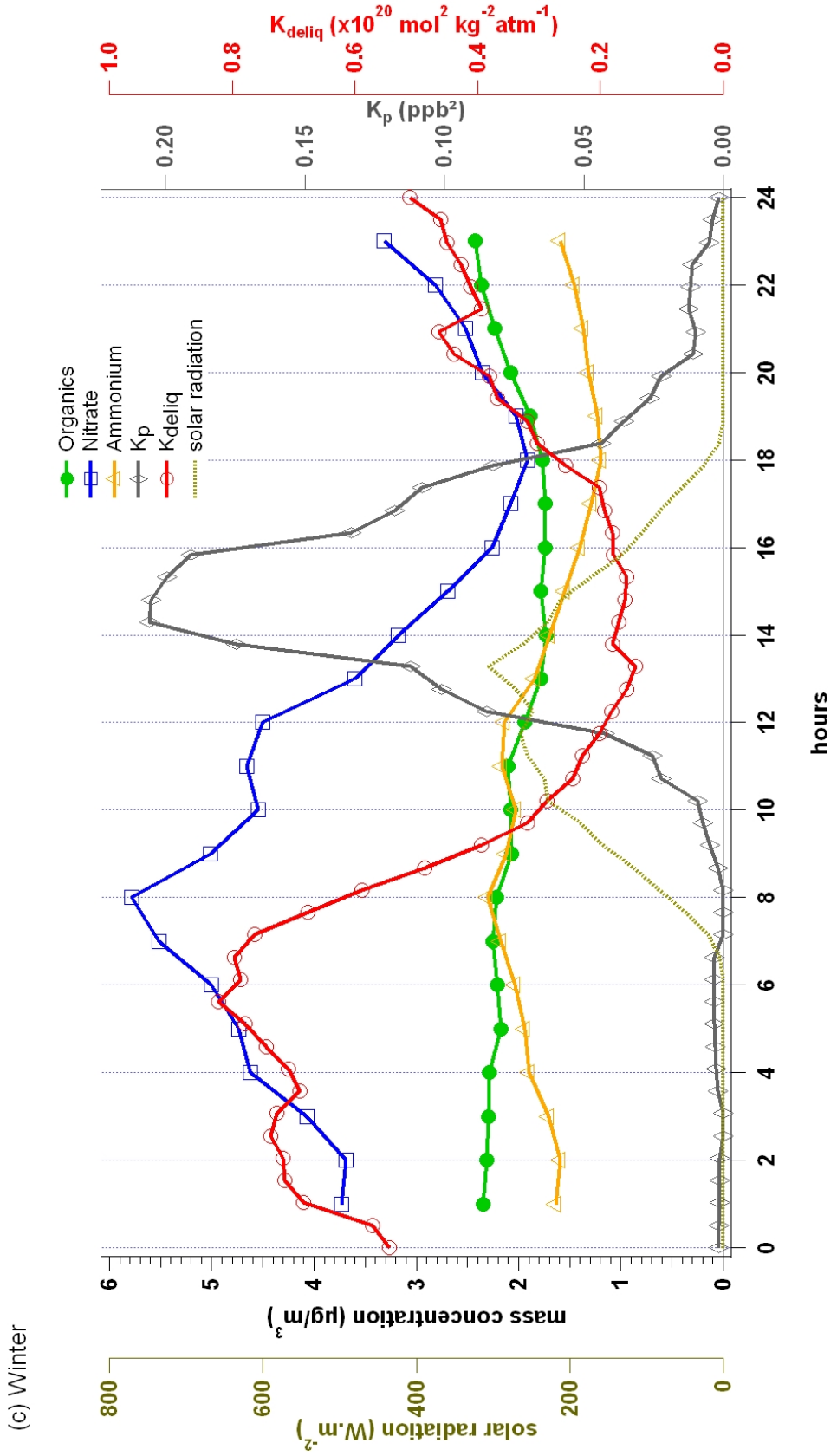

Fig. 4. (continued)

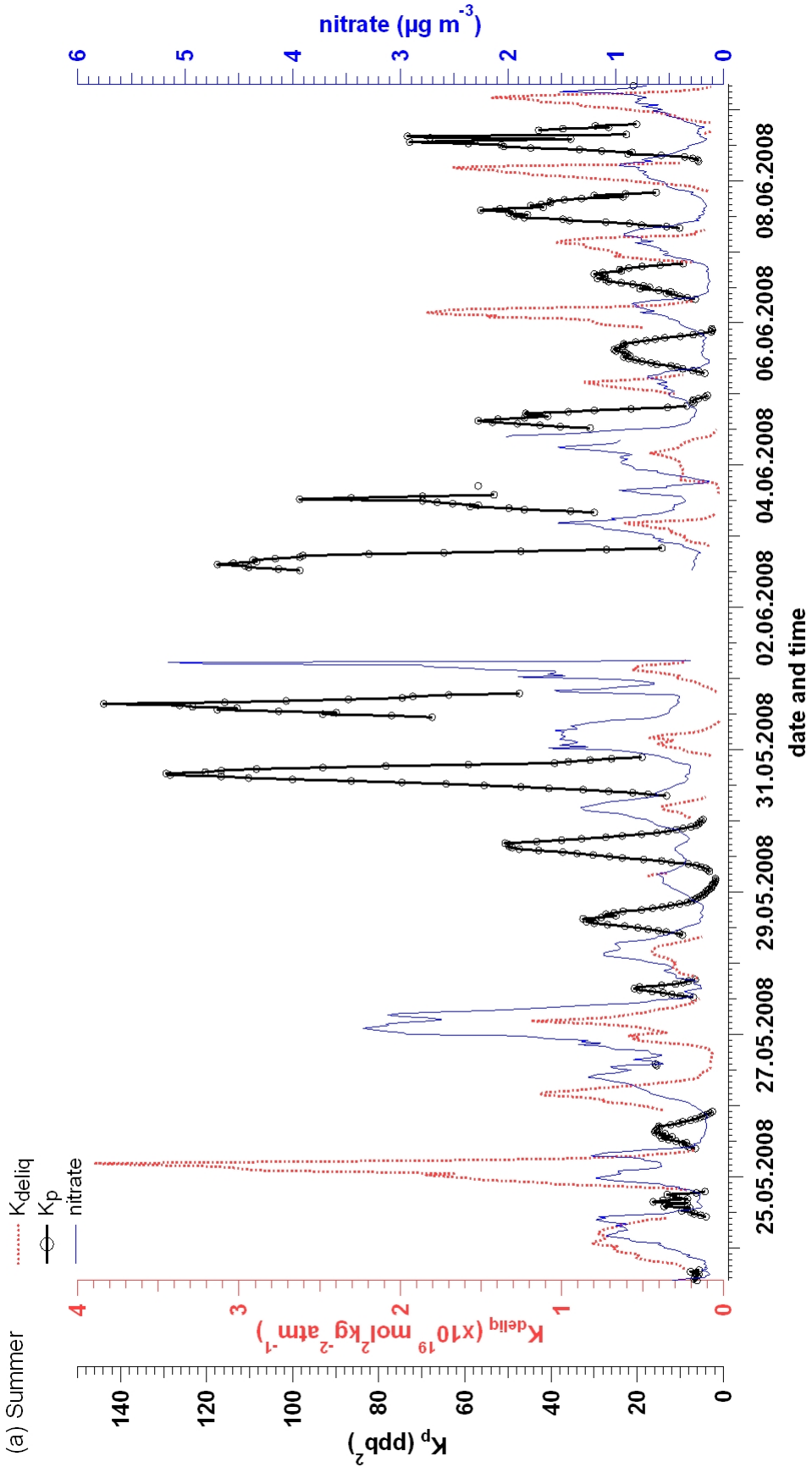

Fig. 5. Time series of the nitrate concentration during the three measurements periods ((a) summer, (b) autumn and (c) Winter). The time series of calculated equilibrium constants (k_p and k_{deliq}) are also included

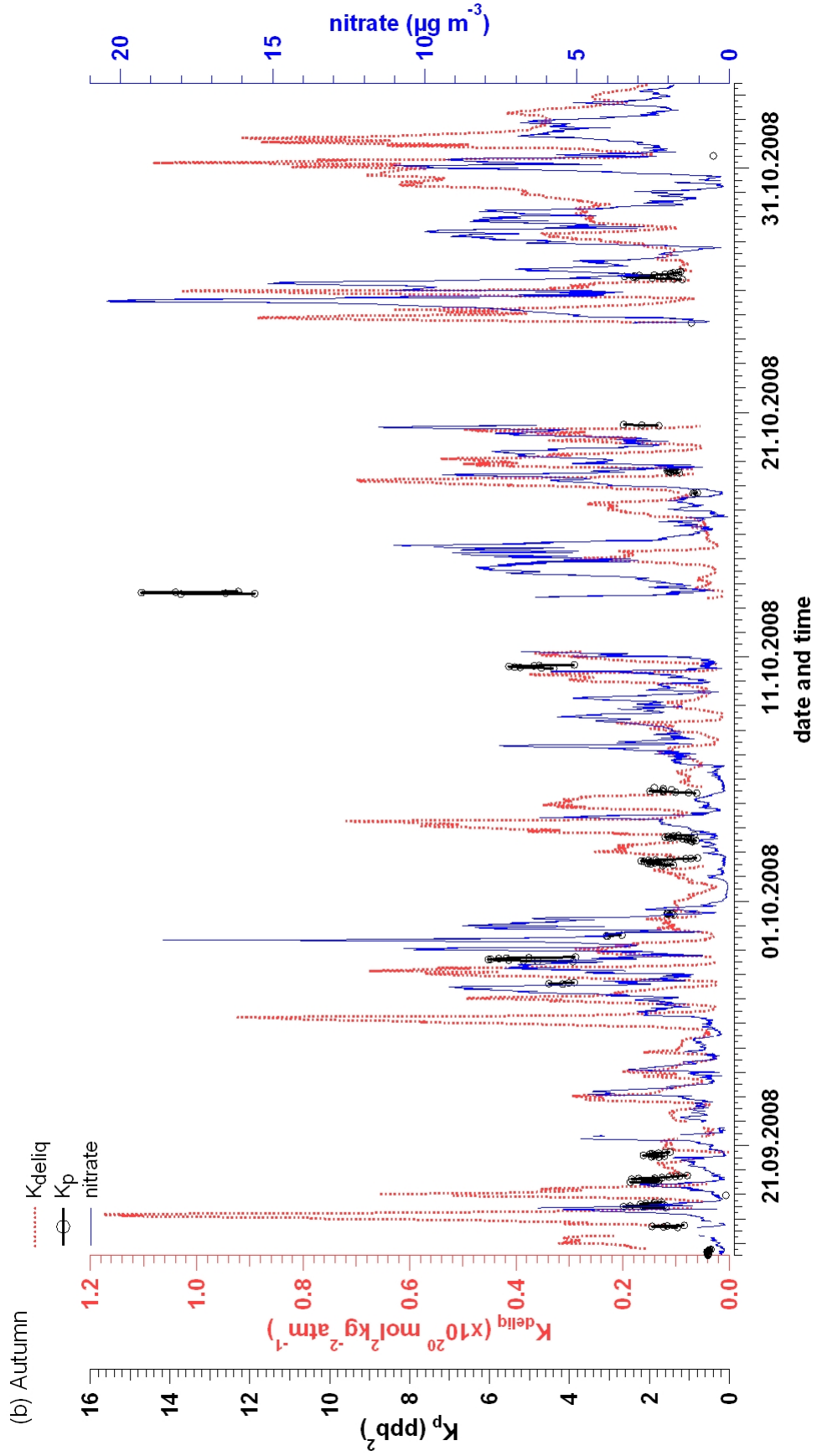

Fig. 5. (continued)

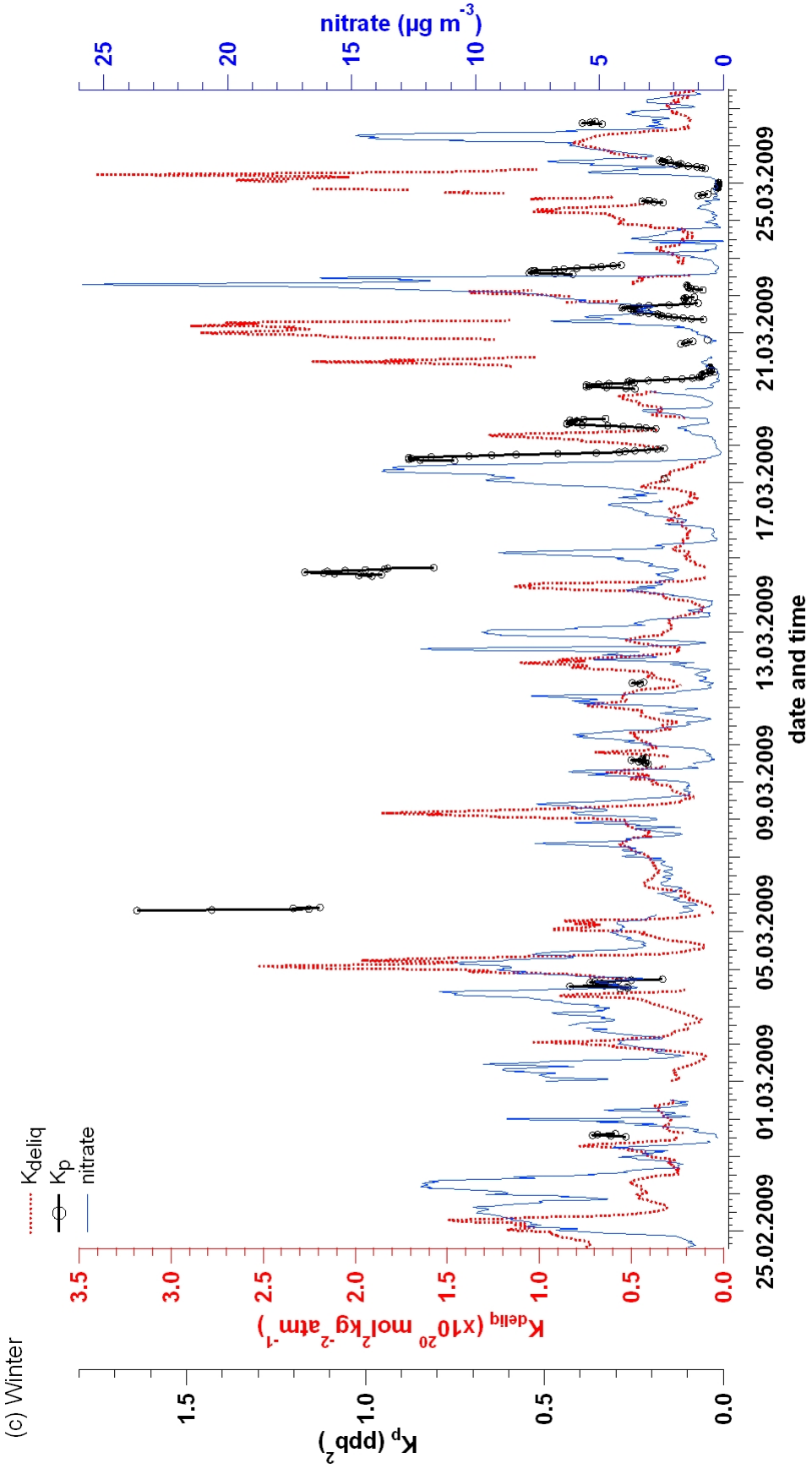

Fig. 5. (continued)

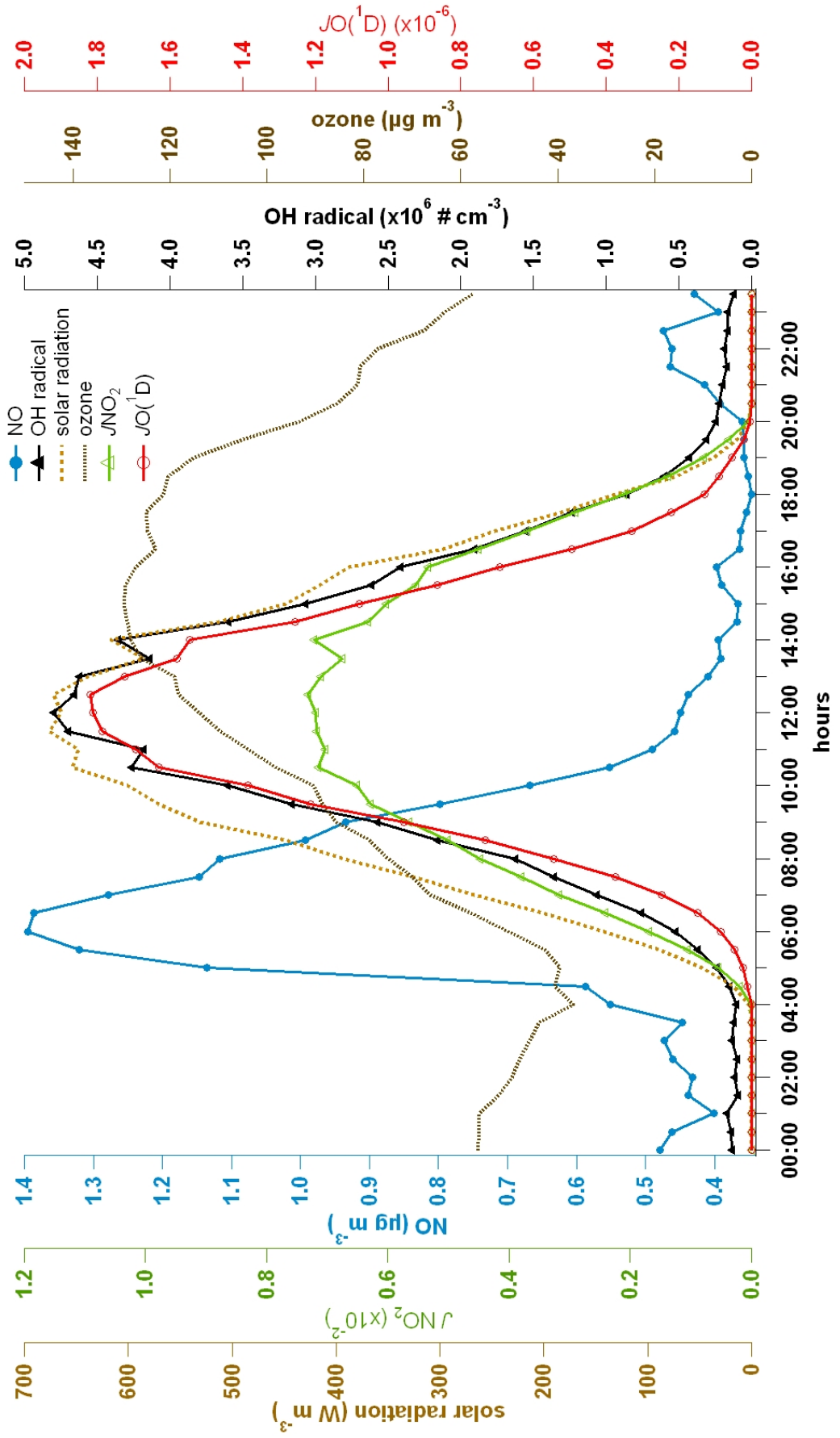

Fig. 6. Diurnal profile of NO concentration during summer and tracers of photochemistry activity (solar radiation, OH, jO(^{1}D), jNO$_2$ and ozone).