Supporting Information

A transition in atmospheric emissions of particles and gases from on-road heavy-duty trucks

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Fig. S1. Relationship between EF_{PN} measured by CPC and EEPS.
Fig. S2. Size-dependent ammonium sulfate concentrations measured by bypass EEPS and TD line EEPS and corresponding correction factors.
Fig. S3. Relationship between $EF_{BC}$ measured by the Aethalometer and (a) $EF_{\text{non-volatile } PM}$ measured by the EEPS in the TD line (unity density of particles was assumed).
Fig. S4. Relationship between $\text{EF}_{\text{NOx}}$ and $\text{EF}_{\text{NO}}$ (NO$_2$ equivalents) measured by the gas analyzers and RSD.
Fig. S5. (a) Composition of all 556 HDTs trucks and (b) 330 Swedish HDTs with valid Euro type information.
**Fig. S6.** Average pollutant emission factors of PM, PN, non-volatile PN and NO$_x$ for each HDT against the individual plume measurements of the corresponding HDT.
**Fig. S7.** (a) $\text{EF}_{\text{BC+BrC}}$ for Euro III to Euro VI HDTs. Non-detectable pollutant emission signals for captured plumes have been replaced by $\text{EF}_{\text{min}}$. For box-and-whisker plots, the top and bottom line of the box are 75th and 25th percentiles of the data, the red line inside the box is the median, and the top and bottom whiskers are 90th and 10th percentiles and (b) scatter plot of $\text{EF}_{\text{BC+BrC}}$ and $\text{EF}_{\text{BC}}$ for Euro III to Euro VI HDTs.
**Fig. S8.** (a) $\text{EF}_{\text{NO}_x}$, (b) $\text{EF}_{\text{NO}_2}/\text{EF}_{\text{NO}_x}$, (c) $\text{EF}_{\text{CO}}$, and (d) $\text{EF}_{\text{HC}}$ for Euro III to Euro VI and non-Swedish HDTs. Non-detectable pollutant emission signals for captured plumes have been replaced by $\text{EF}_{\text{min}}$. For box-and-whisker plots, the top and the bottom line of the box are 75th and 25th percentiles of the data, the red line inside the box is the median, and the top and bottom whiskers are 90th and 10th percentiles. Note that the comparison with the emission standard is only indicative as they are based on test cycle performance.
Fig. S9. Average $\text{EF}_{\text{PN}}$ and $\text{EF}_{\text{PM}}$ fraction remaining of the total particle, nucleation mode, and accumulation mode particle of Euro III-VI HDTs, error bars represent the standard deviation ($1\sigma$).
Fig. S1. Approximation of contributions of pollutants emitted from Swedish HDVs in each Euro class to the total (a) PM, (b) PN, (c) BC and (d) NOx emissions (by adopting median EFs).