



Corrigendum to **“Prediction of source contributions to urban background PM₁₀ concentrations in European cities: a case study for an episode in December 2016 using EMEP/MSC-W rv4.15 – Part 2: The city contribution” published in *Geosci. Model Dev.*, 14, 4143–4158, 2021**

Matthieu Pommier^{1,a}

¹Norwegian Meteorological Institute, Oslo, Norway

^anow at: Ricardo Energy and Environment, Harwell, Oxfordshire, UK

Correspondence: Matthieu Pommier (matthieu.pommier@ricardo.com)

Published: 9 September 2021

During the production process (typesetting) a typo has resulted in incorrect sentences. The corrected sentences read as follows:

– Section 2.1, p. 3:

The main updates since the version presented in Simpson et al. (2012) and used in this work concern a new calculation of aerosol surface area (now based upon the semi-empirical scheme of Gerber, 1985), a revised parameterisations of N₂O₅ hydrolysis on aerosols, additional gas–aerosol loss processes for O₃, nitric acid (HNO₃) and hydroperoxy radical (HO₂), a new scheme for ship NO_x emissions, a new calculated natural marine emissions of dimethyl sulfide (DMS), the use of a new land cover (used to calculate biogenic volatile organic carbon (VOC) emissions and dry deposition), and an update in the source function for sea salt production to account for whitecap area fractions, following the work of Callaghan et al. (2008) (Simpson et al., 2016, 2017).

– Section 3.1, p. 5:

The perturbations are done for anthropogenic emissions of CO, SO_x, NO_x, NH₃, non-methane volatile organic compounds (NMVOCs), and primary particulate matter

(PPM).

Note that, except on NH₃, the main source regions of these anthropogenic emissions such as NO_x and CO are located over the main urban areas as shown in Fig. S1.

– Section 4.3, p. 9:

For example, an amount of NO_x emitted over a source can result in a certain NH₄NO₃ concentration in the city. When NO_x is emitted in excess, i.e. within an NH₃-limited regime, a NO_x emission reduction will have a small effect at the receptor point. Thus, the combination of NO_x and NH₃ chemical regimes within different source regions may lead at the end to a mismatch between the sum of the contributions and the total PM₁₀, resulting in these negative concentrations.