

Population exposure to outdoor NO₂, black carbon, ultrafine and fine particles over Paris with multi-scale modelling down to the street scale

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Reply to reviewer 2

The authors need to modify the model-to-data comparison to the model-to-observation comparison.

Our reply: Modified.

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- Lines 157 & 158: The expression of 'hours×processors' is inappropriate. Describe it specifically.

Our reply: We have changed expressions of 'hours×processors' to "processor hours", which commonly used in journal papers, and additionally included the specific time and number of processors in parentheses.

10 "Using a one-way coupling approach, the regional-scale and local-scale simulations are performed sequentially. For the regional scale, the two-month simulation using WRF-CHIMERE models requires approximately 11520 processor hours (192 processors over 60 hours). The local scale simulations are less expensive, and the two-month simulation with the MUNICH model requires around 7680 processor hours (64 processors over 120 hours) to simulate the street concentrations in the Parisian street-network composed of 4655 streets."

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- *Line 180: Title: Review and correct the title of PN emission if incorrect. PNC emission (?)*.

Our reply: The title of PN emission is correct, because emissions are different from concentrations, and in PNC, the "C" stands for concentrations. The term "PNC emission" was modified to "PN emission".