

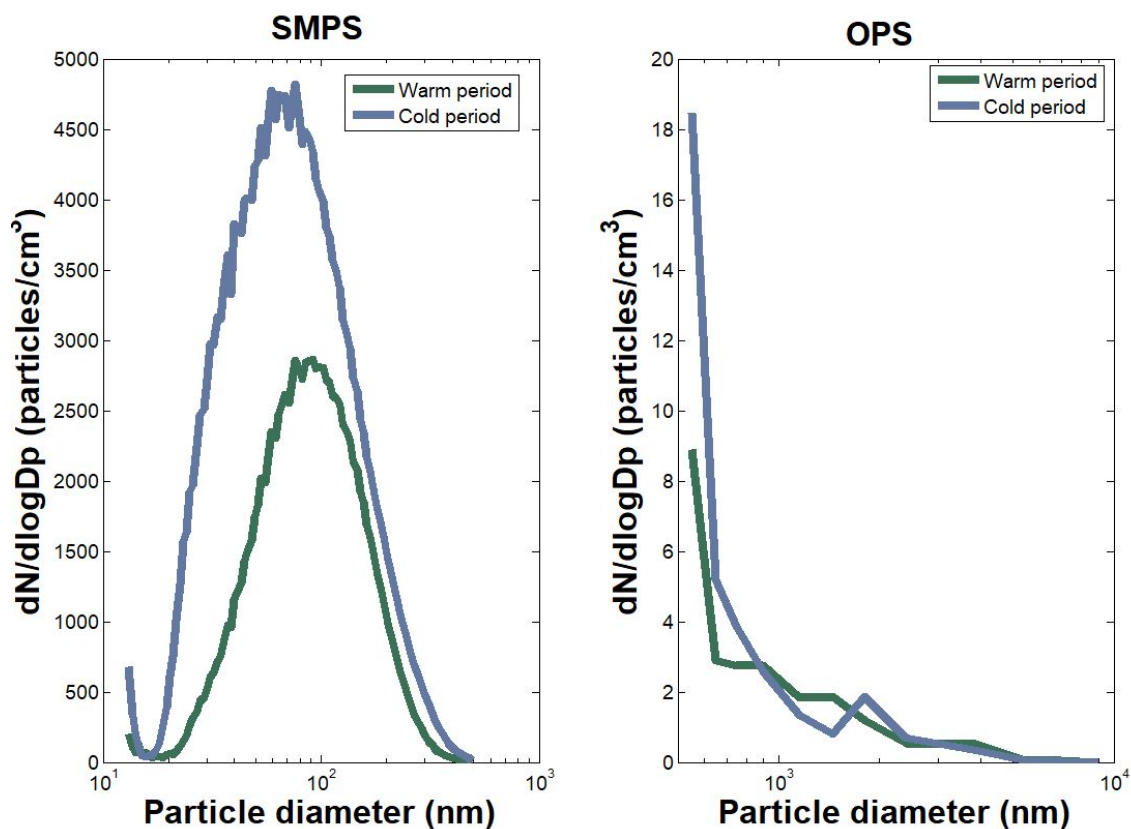
## Supplementary Material

### Regional deposited dose in the human respiratory tract using different particulate metrics

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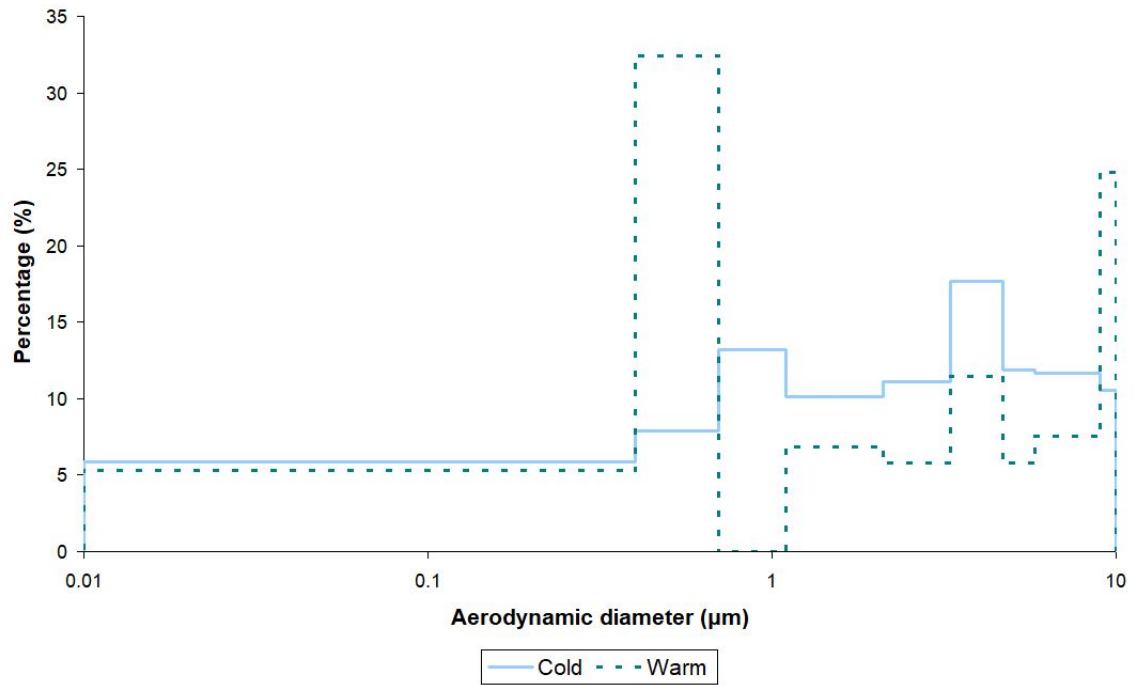


**Supplementary Figure 1** Size distribution data ( $dN/d\log D_p$ ) of SMPS and OPS measurements. Comparison between warm and cold periods.

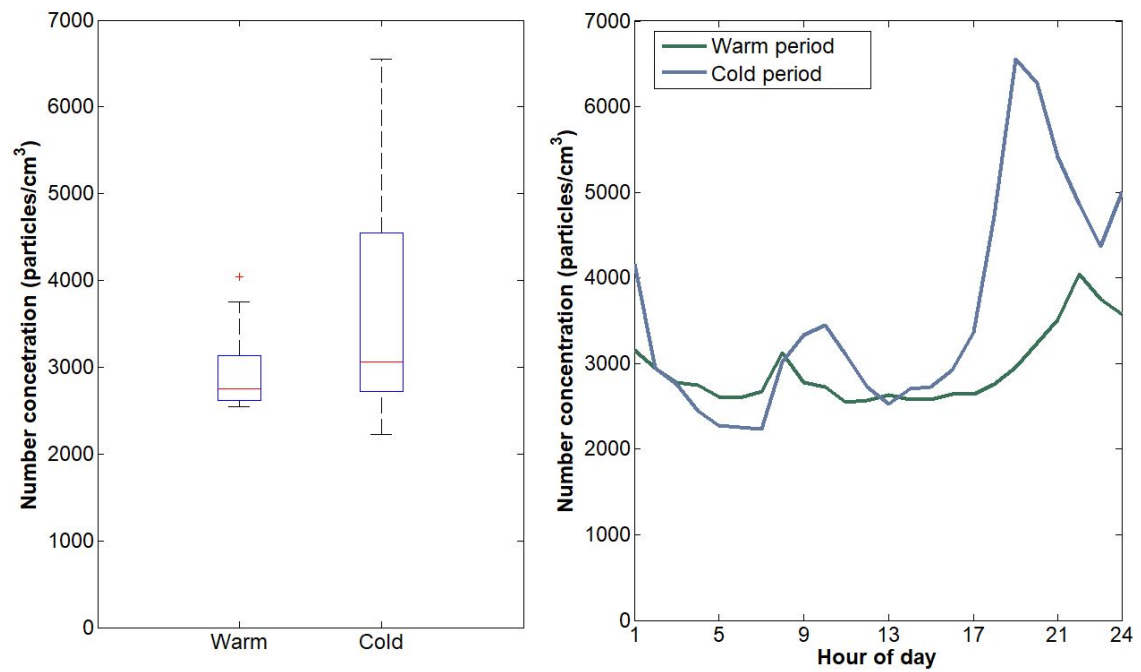


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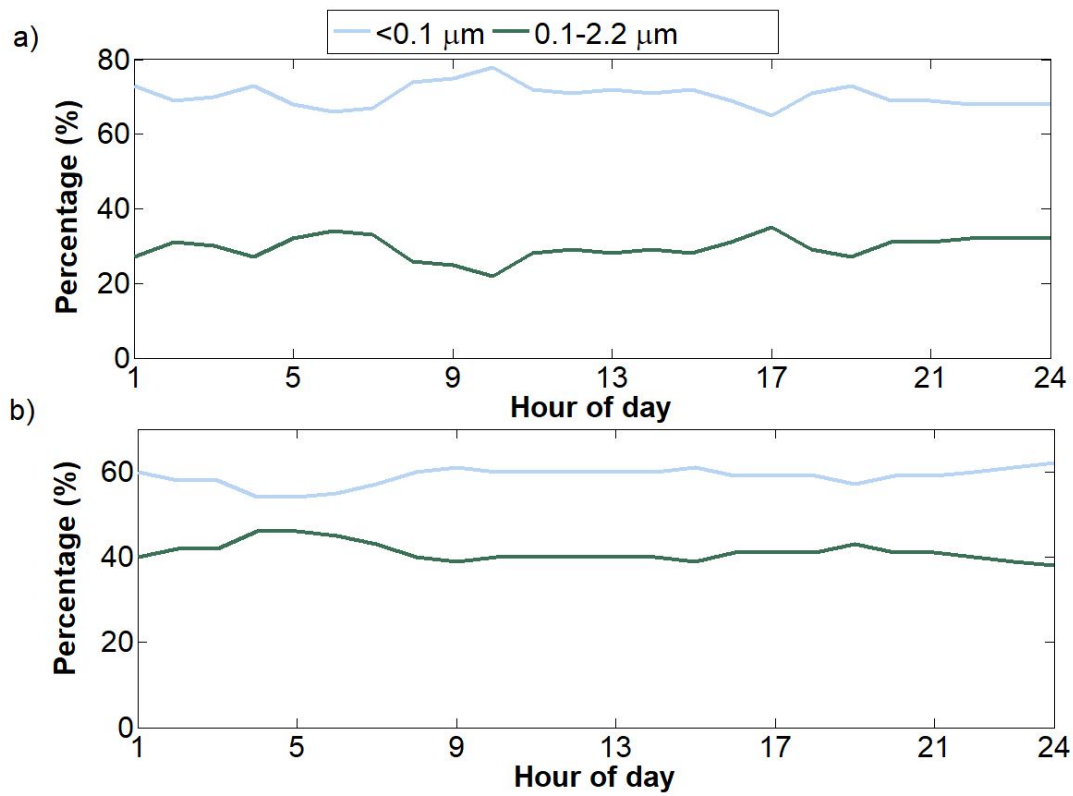
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**Supplementary Figure 2.** Size distribution of mass percentage (%) of PM<sub>10</sub> during cold (27/11/20-08/01/21) and warm period (22-28/05/21)



**Supplementary Figure 3.** Hourly particle number concentration (particles/cm<sup>3</sup>) during Campaign I for warm and cold periods.



**Supplementary Figure 4.** % Contribution of three particle size ranges (<0.1 μm, 0.1-2.2 μm and 2.2-10 μm) to the PN<sub>10</sub> concentrations during a) cold period (24/11/20-30/01/21) and b) warm period (24/05/21-09/06/21). The contribution of 2.2-10 μm particle size range to PN<sub>10</sub> is negligible and is not shown in the figure.

**Supplementary Table 1.** Inhalation rates (m<sup>3</sup>/h) used in the ExDoM2 as proposed by ICRP <sup>[28]</sup>

<b>Adult male</b>	
Sitting	0.54
Light exercise	1.50
Heavy exercise	3.50
<b>Light exercise</b>	
Adult male	1.50
Adult female	1.25
15 year old male	1.38
15 year old female	1.30
10 year old	1.12
5 year old	0.57

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