

## Supplementary Information

### **The association between intermodal ( $PM_{1-2.5}$ ) and $PM_1$ , $PM_{2.5}$ , coarse fraction and meteorological parameters in various environments in Central Europe**

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**Table S1.** Characteristics of measuring sites.

Measurement site	Type of locality	GPS	Measurement periods	Season	Placement of instruments
Brezno	rural	50°24'N, 13°25'E	5/8 - 19/8/2009 13/1 - 27/1/2010 12/8 - 8/9/2010	summer winter summer	5 m above the ground, on the roof of the measurement station
Celakovice	urban	50°9'N, 14°45'E	21/1 - 4/2/2015	winter	5 m above the ground, on the roof of measurement station
Dobre Stesti	rural	49°41'N, 13°18'E	13/2/ - 26/2/2009 12/9 - 28/9/2009 4/2 - 11/2/2010	winter summer winter	5 m above the ground, on the roof of measurement station
Laz	rural	49°39'N, 13°54'E	18/3/ - 2/4/2009 23/8 - 6/9/2009 16/2 - 1/3/2010 13/9 - 27/9/2010	winter summer winter summer	5 m above the ground, on the roof of measurement station
Mokropsy	rural	49°56'N, 14°19'E	5/12 - 12/12/2008 2/2 - 12/2/2009 13/3 - 21/3/2009 20/5 - 28/5/2009 10/8 - 18/8/2009	winter winter winter summer summer	5 m above the ground, on the balcony in the 1. floor
Ostrava Plesna	suburban	49°51'N, 18°7'E	6/2 - 5/3/2014	winter	2 m above the ground
Ostrava Radvanice	urban	49°48'N, 18°20'E	6/2 - 5/3/2014	winter	5 m above the ground, on the roof of measurement station
Prague Benatska	urban	50°4'N, 14°25'E	4/3 - 16/3/2009 3/6 - 21/6/2009 4/3 - 17/3/2010 5/6 - 20/6/2010 21/8 - 4/9/2014 17/2 - 3/3/2015	winter summer winter summer summer winter	20 m above the ground
Prague Mikulandska	urban	50°4'N, 14°25'E	30/11 - 6/12/2005 17/1 - 26/1/2006 17/2 - 24/2/2006 14/3 - 23/3/2006 26/11 - 3/12/2007 2/2 - 12/2/2009	winter winter winter winter winter winter	3.5 m above the ground, on the roof of an outbuilding in the school yard
Prague Petriny	urban	50°5'N, 14°20'E	16/3 - 23/3/2007 29/10 - 6/11/2007 26/11 - 3/12/2007 9/5 - 17/5/2007 21/8 - 28/8/2007	winter summer winter summer summer	12 m above the ground, on the roof of a school building
Prague Suchdol	suburban	50°7'N, 14°23'E	21/8 - 4/9/2014 5/2 - 19/2/2015	summer winter	2 m above the ground
Svrcovec	rural	49°25'N, 13°14'E	20/2 - 28/2/2009 16/6 - 20/6/2009 28/7 - 5/8/2009 19/11 - 27/11/2009 31/1 - 8/2/2010	winter summer summer winter winter	2 m above the ground, 12 m from house and 50 m from nearest road, in the backyard

**Table S2.** Spearman correlation coefficients between PM<sub>1</sub> and meteorological factors (statistically significant correlations in bold, p-value<0.05) for every environment.

Category	PM <sub>1</sub>									
	Winter					Summer				
	1	2	3	4	5	6	7	8	9	10
Wind speed	<b>-0.58</b>	<b>-0.69</b>	-0.28	<b>-0.65</b>	-0.21	<b>-0.41</b>	-0.22	<b>-0.43</b>	<b>-0.82</b>	-0.22
Relative humidity	-0.38	-0.07	<b>0.39</b>	<b>0.58</b>	0.31	0.28	-0.19	-0.09	0.27	0.16
Temperature	0.00	<b>-0.31</b>	<b>-0.56</b>	<b>-0.37</b>	0.28	0.04	<b>0.33</b>	<b>0.32</b>	0.52	0.18

1-urban (TSP, in), 2-urban (TSP, out), 3-rural (TSP, in), 4-rural (TSP, out), 5-urban (PM<sub>10</sub>, in), 6-suburban (PM<sub>10</sub>, out), 7-urban (TSP), 8-rural (TSP), 9-urban (PM<sub>10</sub>), 10-suburban (PM<sub>10</sub>).

**Table S3.** Spearman correlation coefficients between coarse fraction and meteorological factors (statistically significant correlations in bold, p-value<0.05) for every environment.

Category	Coarse fraction									
	Winter					Summer				
	1	2	3	4	5	6	7	8	9	10
Wind speed	-0.37	<b>-0.56</b>	<b>-0.41</b>	-0.28	0.04	-0.16	0.19	-0.26	0.07	0.26
Relative humidity	-0.32	<b>-0.31</b>	-0.09	-0.01	0.01	0.12	-0.08	<b>-0.58</b>	-0.15	<b>-0.65</b>
Temperature	0.20	-0.09	0.10	0.23	<b>0.67</b>	0.32	<b>0.30</b>	<b>0.62</b>	0.40	0.20

1-urban (TSP, in), 2-urban (TSP, out), 3-rural (TSP, in), 4-rural (TSP, out), 5-urban (PM<sub>10</sub>, in), 6-suburban (PM<sub>10</sub>, out), 7-urban (TSP), 8-rural (TSP), 9-urban (PM<sub>10</sub>), 10-suburban (PM<sub>10</sub>).