Supplementary material

Presentation of the EURODELTA III inter-comparison exercise - Evaluation of the chemistry transport models performance on criteria pollutants and joint analysis with meteorology

by

B. Bessagnet, G. Pirovano, M. Mircea, C. Cuvelier, A. Aulinger, G. Calori, G. Ciarelli, A. Manders, R. Stern, S. Tsyro, M. García Vivanco, P. Thunis, M.-T. Pay, A. Colette, F. Couvidat, F. Meleux, L. Rouïl, A. Ung, S. Aksoyoglu, J. M. Baldasano, J. Bieser, G. Briganti, A. Cappelletti, M. D'Isidoro, S. Finardi, R. Kranenburg, C. Silibello, C. Carnevale, W. Aas, J.-C. Dupont, H. Fagerli, L. Gonzalez, L. Menut, A. S. H. Prévôt, P. Roberts, L. White

Table of Content

S0: Supplementary material for Individual model performances on meteorological variables (U10: 10 m wind speed, T2M: 2 meter temperature, PBL: Height of the Planetary Boundary Layer) 2

S1: Supplementary material for Individual model performances on pollutant concentrations 11

S2 : Supplementary material for Individual model performances on Ozone concentrations 20

S3 : Supplementary material for Individual model performances on Nitrogen Dioxide concentrations 25

S4 : Supplementary material for Individual model performances on Sulphur Dioxide concentrations 30

S5: Supplementary material for Individual model performances on PM_{10} concentrations..... 35

S6 : Supplementary material for Individual model performances on $PM_{2.5}$ concentrations 40

S7: Diurnal evolution of the coefficient of variation over different countries..... 45

S8: Description of background sites 47

S0: Supplementary material for Individual model performances on meteorological variables (U10: 10 m wind speed, T2M: 2 meter temperature, PBL: Height of the Planetary Boundary Layer)

Correlations in time and space (Cor.), Biases and Root Mean Square Errors in are computed based on hourly values. Nb is the number of available observations for a given variable.

For MINNI, U10 and T2M are respectively the wind speed at the first level of the model.

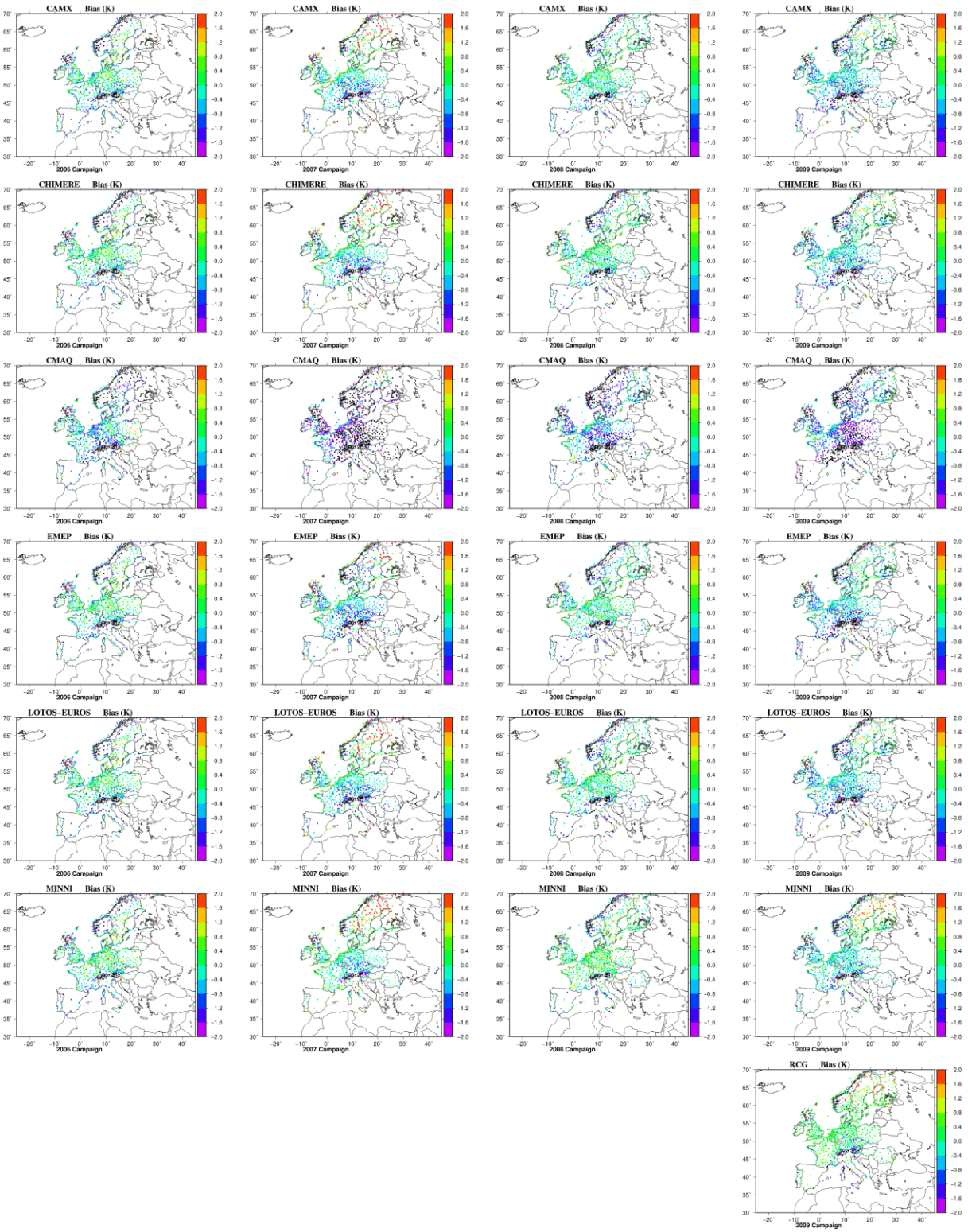
Performances for the 2006 & 2007 campaigns

Variable	Obs.	Model name	Model val.	Bias	Cor.	RMSE	Nb.
			2006				
T2M (K)	289.92	CAMX	289.37	-0.55	0.93	2.29	821758
		CHIM	289.44	-0.48	0.93	2.27	
		CMAQ	289.06	-0.85	0.91	2.79	
		EMEP	289.44	-0.47	0.94	2.23	
		LOTO	289.4	-0.51	0.93	2.27	
		MINNI	289.47	-0.45	0.93	2.32	
		RCG	ND	ND	ND	ND	
U10 (m s^{-1})	3.22	CAMX	3.32	0.10	0.70	1.75	752082
		CHIM	3.31	0.09	0.70	1.74	
		CMAQ	3.20	-0.02	0.62	1.95	
		EMEP	3.50	0.28	0.70	1.76	
		LOTO	3.36	0.14	0.70	1.74	
		MINNI	3.31	0.09	0.68	1.82	
		RCG	ND	ND	ND	ND	
PBL (m)	1710	CAMX	1608	-102	0.55	740	1631
		CHIM	1608	-102	0.55	740	
		CMAQ	1715	5	0.46	850	
		EMEP	1258	-451	0.48	886	
		LOTO	1540	-169	0.56	730	
		MINNI	1094	-616	0.51	952	
		RCG	ND	ND	ND	ND	
			2007				
T2M (K)	276.79	CAMX	276.47	-0.31	0.95	2.27	812356
		CHIM	276.49	-0.30	0.95	2.26	
		CMAQ	274.75	-2.04	0.92	3.53	
		EMEP	276.07	-0.72	0.94	2.47	
		LOTO	276.47	-0.32	0.95	2.25	
		MINNI	276.75	-0.03	0.94	2.31	
		RCG	ND	ND	ND	ND	
U10 (m s^{-1})	4.77	CAMX	5.61	0.85	0.83	2.37	749562
		CHIM	5.60	0.83	0.83	2.34	
		CMAQ	4.92	0.15	0.78	2.51	
		EMEP	5.43	0.66	0.81	2.38	
		LOTO	5.66	0.89	0.83	2.36	
		MINNI	5.79	1.02	0.83	2.42	
		RCGC	ND	ND	ND	ND	
PBL (m)	931	CAMX	822	-109	0.63	444	1673
		CHIM	822	-109	0.63	444	
		CMAQ	868	-63	0.47	538	
		EMEP	880	-51	0.48	515	
		LOTO	782	-149	0.63	454	
		MINNI	619	-312	0.42	590	
		RCG	ND	ND	ND	ND	

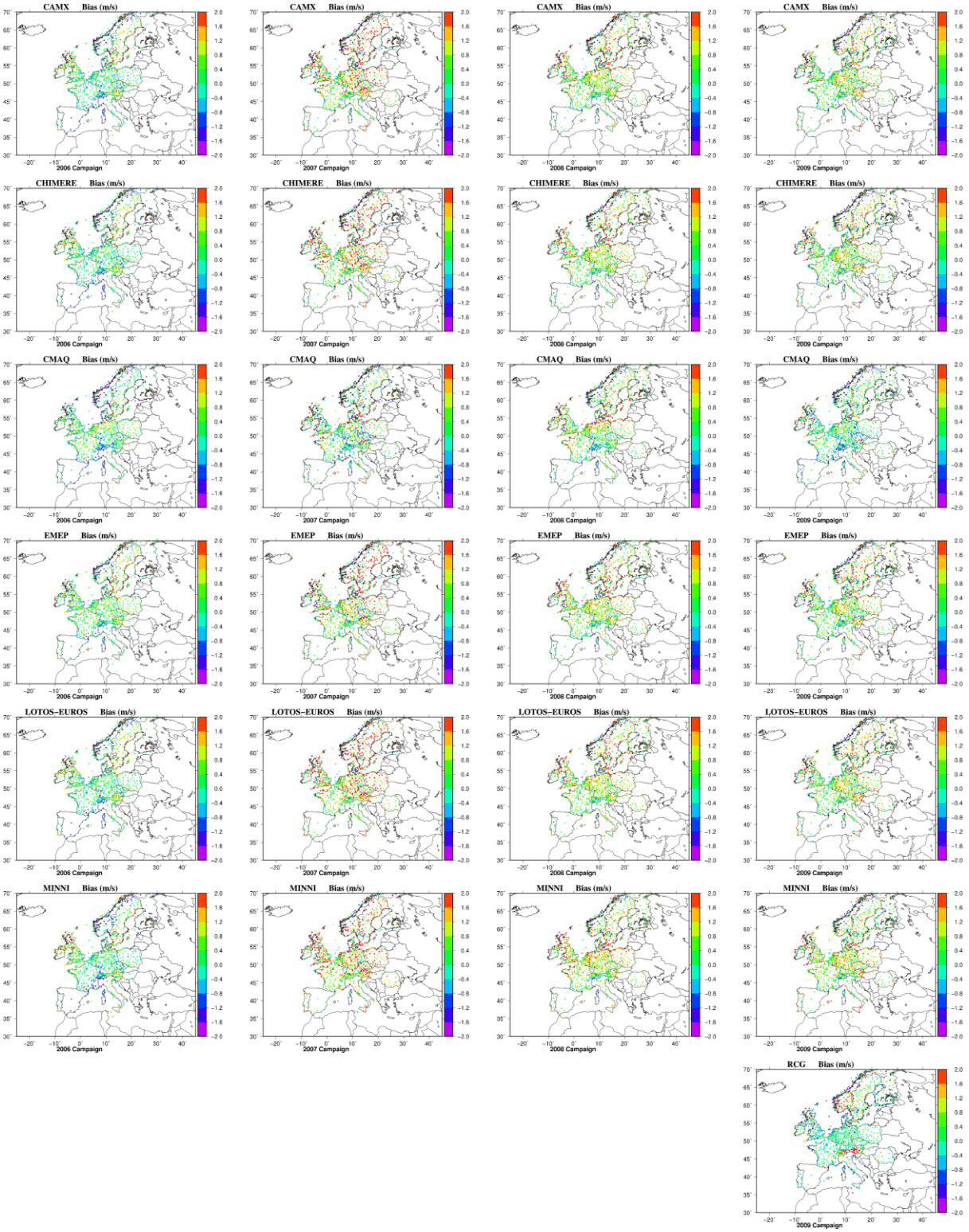
Performances for the 2008 & 2009 campaigns

Pollutant	Obs.	Model name	Model val.	Bias	Cor.	RMSE	Nb.
			2008				
T2M (K)	284.2	CAMX	283.82	-0.40	0.93	1.93	920292
		CHIM	283.87	-0.34	0.93	1.91	
		CMAQ	283.04	-1.18	0.88	2.73	
		EMEP	283.78	-0.44	0.92	1.98	
		LOTO	283.84	-0.37	0.93	1.90	
		MINNI	284.09	-0.13	0.90	2.12	
		RCG	ND	ND	ND	ND	
U10 (m s^{-1})	3.39	CAMX	4.01	0.61	0.78	1.93	834623
		CHIM	4.00	0.61	0.78	1.92	
		CMAQ	3.83	0.43	0.73	2.14	
		EMEP	4.00	0.61	0.78	1.95	
		LOTO	4.04	0.65	0.78	1.93	
		MINNI	4.14	0.74	0.79	1.97	
		RCG	ND	ND	ND	ND	
PBL (m)	1420	CAMX	1183	-237	0.64	554	1515
		CHIM	1183	-237	0.64	554	
		CMAQ	1307	-112	0.53	598	
		EMEP	1055	-364	0.45	690	
		LOTO	1125	-295	0.65	576	
		MINNI	827	-592	0.41	838	
		RCG	ND	ND	ND	ND	
			2009				
T2M (K)	276.76	CAMX	276.05	-0.71	0.94	2.23	987838
		CHIM	276.10	-0.66	0.94	2.20	
		CMAQ	275.19	-1.57	0.89	3.13	
		EMEP	275.91	-0.84	0.93	2.35	
		LOTO	276.06	-0.70	0.94	2.19	
		MINNI	276.40	-0.36	0.94	2.11	
		RCG	276.8	0.04	0.94	2.10	
U10 (m s^{-1})	4.01	CAMX	4.52	0.51	0.75	2.08	905405
		CHIM	4.51	0.50	0.76	2.06	
		CMAQ	3.99	-0.01	0.69	2.25	
		EMEP	4.50	0.50	0.74	2.10	
		LOTO	4.56	0.55	0.76	2.07	
		MINNI	4.65	0.64	0.77	2.07	
		RCG	4.04	0.03	0.77	1.95	
PBL (m)	1263	CAMX	1114	-149	0.72	481	1505
		CHIM	1114	-149	0.72	481	
		CMAQ	1098	-165	0.58	586	
		EMEP	1005	-258	0.58	601	
		LOTO	1055	-208	0.73	500	
		MINNI	754	-509	0.56	754	
		RCG	1064	-199	0.62	561	

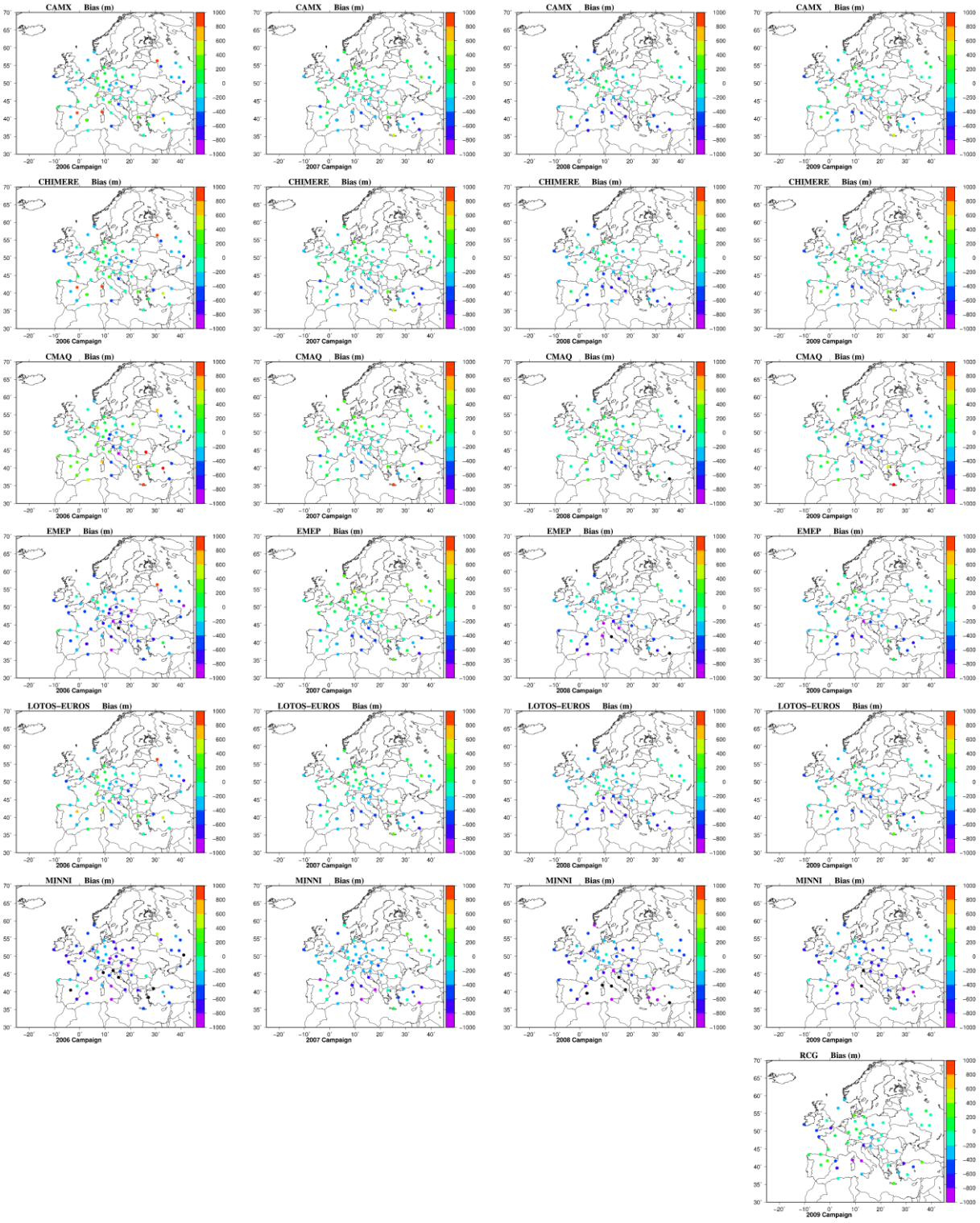
Averaged 2m temperature bias (K) for individual models for each campaign (black dots refer to value below the minimum color scale value)



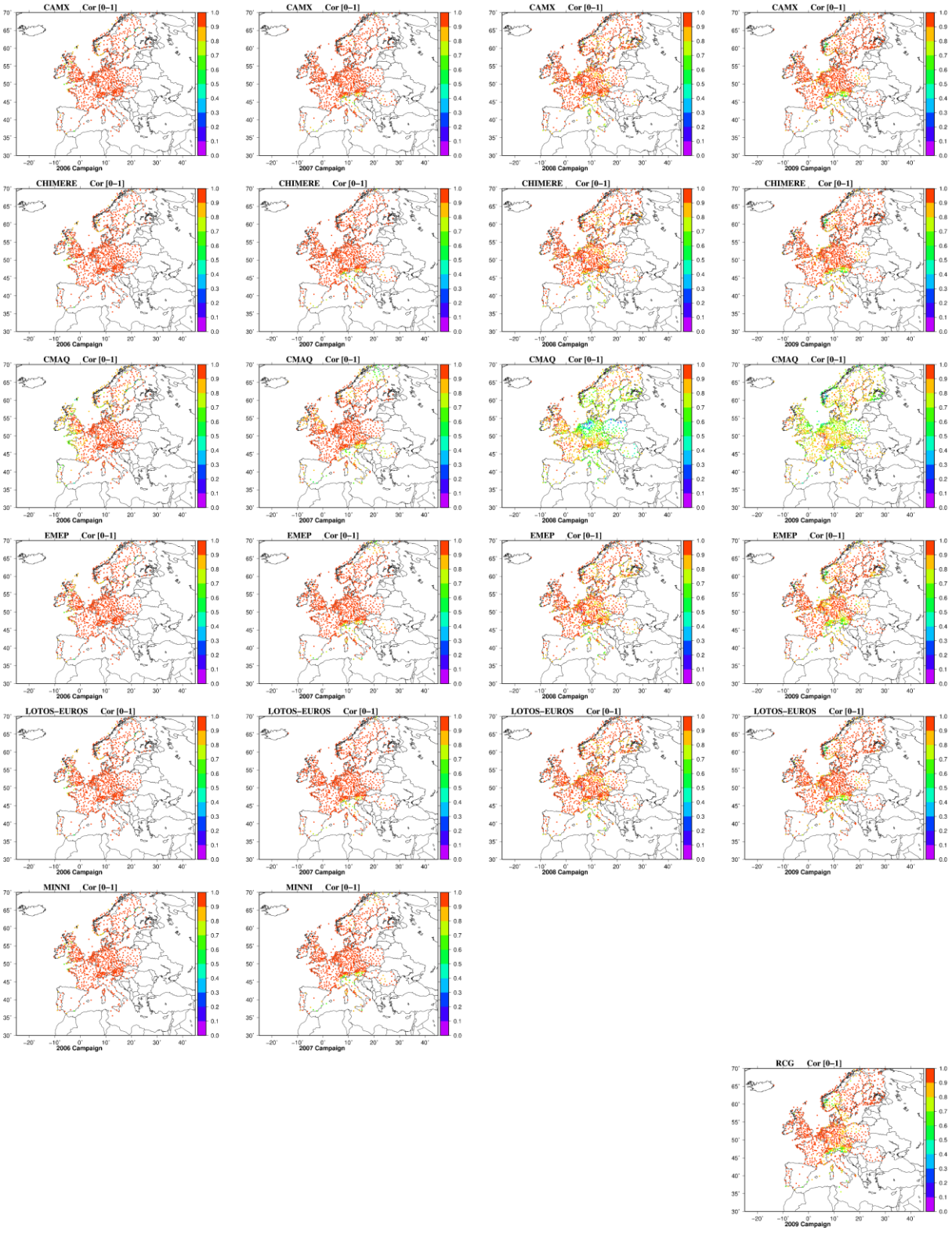
Averaged wind speed bias (m s^{-1}) for individual models for each campaign (black dots refer to value below the minimum color scale value)



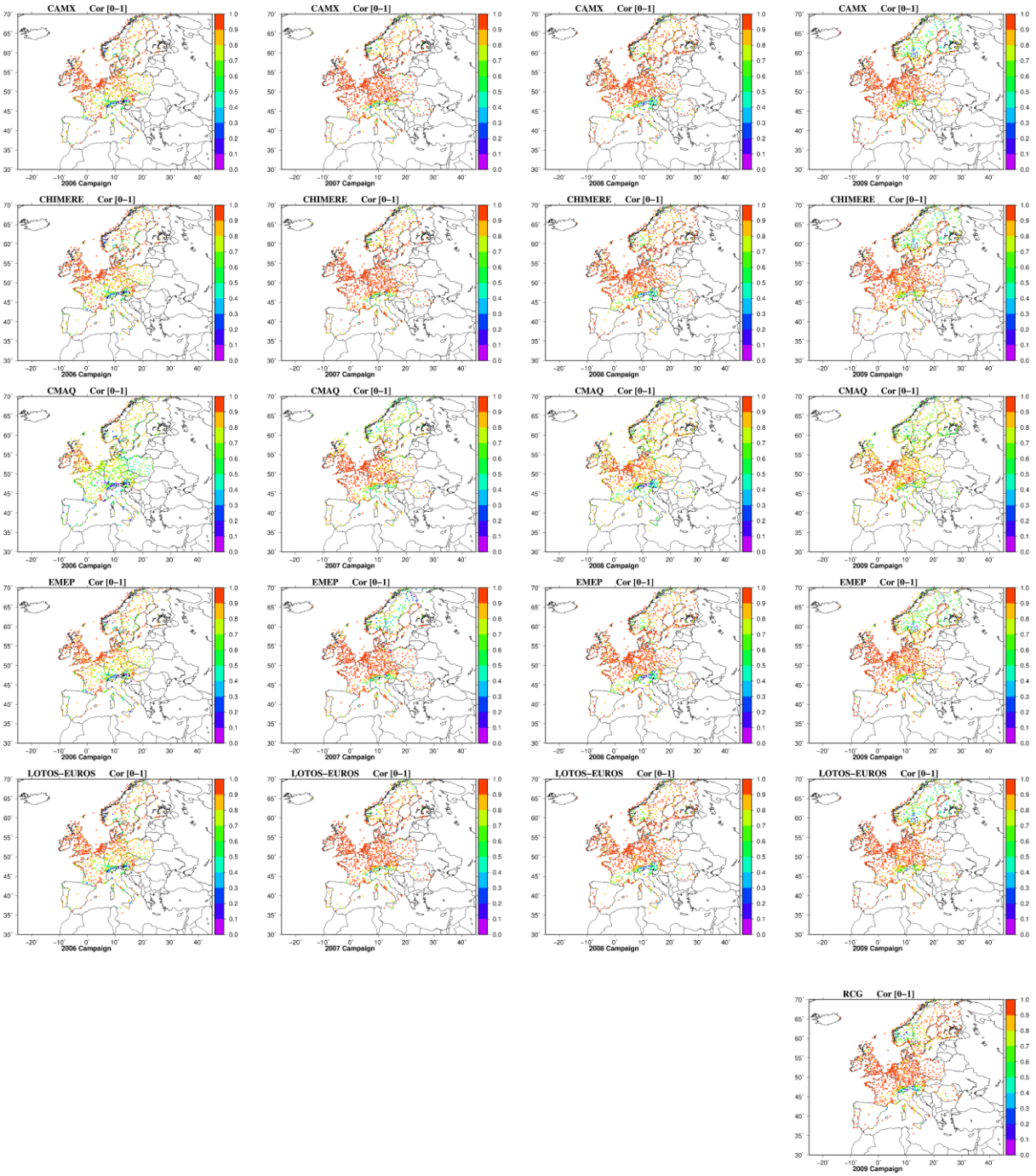
Averaged PBL bias (m) for individual models for each campaign (black dots refer to value below the minimum color scale value)



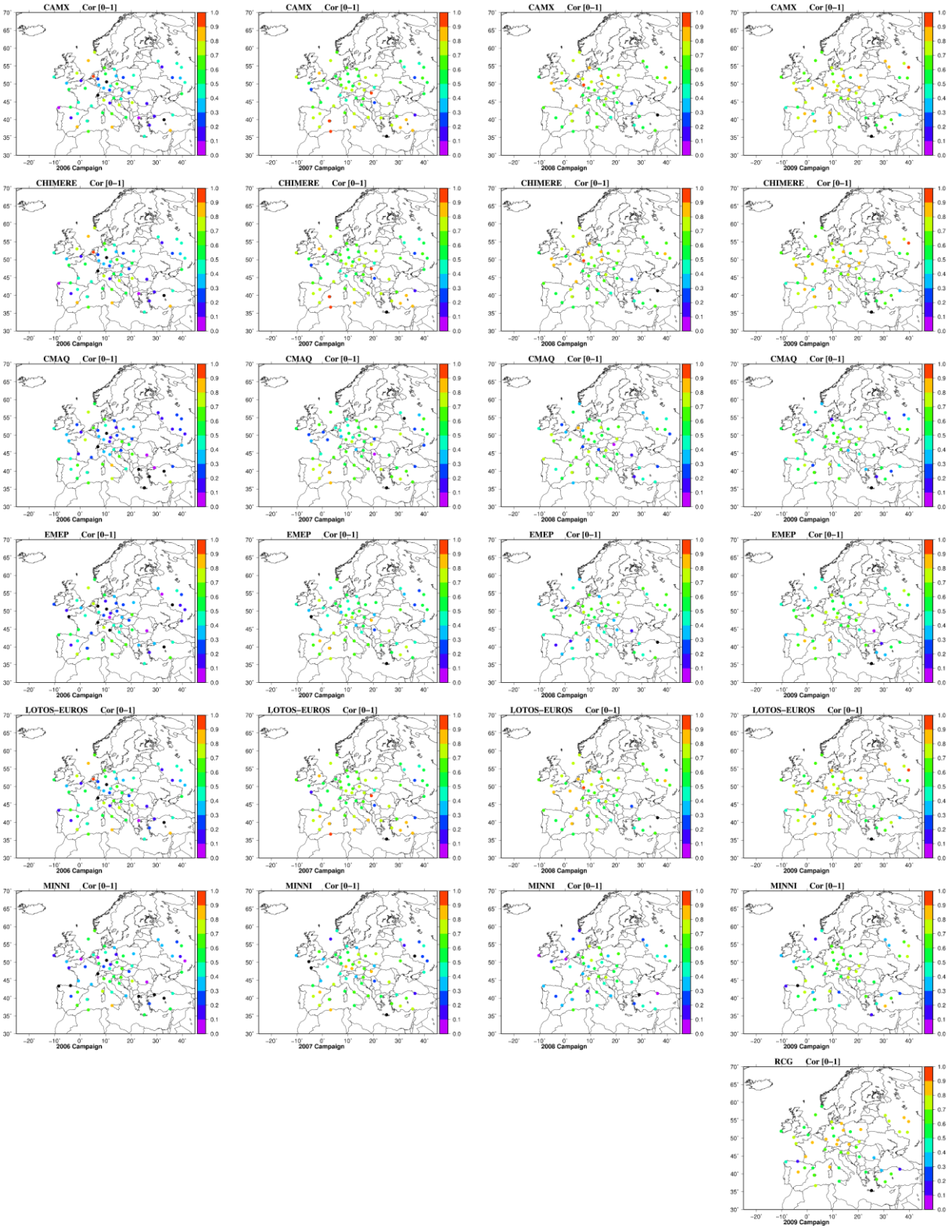
Averaged 2m temperature correlation (daily basis) for individual models for each campaign (black dots refer to value below the minimum color scale value)



Averaged wind speed correlation (daily basis) for individual models for each campaign (black dots refer to value below the minimum color scale value)



Averaged PBL correlation (daily basis) for individual models for each campaign (black dots refer to value below the minimum color scale value)



S1: Supplementary material for Individual model performances on pollutant concentrations

Correlations in time and space (Cor.), Biases (in µg m^{-3}) and Root Mean Square Errors in (RMSE in µg m^{-3}) are computed based on daily values. Observation values (Obs.) and model values are in µg m^{-3}. Nb is the number of available observations for a given pollutant.

2006 campaign – All daily data

Pollutant	Obs.	Model name	Model val.	Bias	Cor.	RMSE	Nb.
O3	80.99	CAMX	95.13	14.14	0.60	23.19	3324
		CHIM	80.36	-0.63	0.27	21.92	
		CMAQ	86.98	5.99	0.24	24.03	
		EMEP	82.12	1.14	0.50	19.26	
		LOTO	78.06	-2.92	0.49	19.52	
		MINNI	87.87	6.89	0.55	20.11	
		RCG	ND	ND	ND	ND	
		MACCA	*81.19*	*0.20*	*0.44*	*20.74*	
NO2	5.10	CAMX	3.49	-1.61	0.67	3.81	2285
		CHIM	5.54	0.44	0.67	5.10	
		CMAQ	6.50	1.39	0.63	5.98	
		EMEP	4.29	-0.81	0.68	3.73	
		LOTO	4.67	-0.43	0.66	4.14	
		MINNI	4.59	-0.52	0.68	3.73	
		RCG	ND	ND	ND	ND	
SO2	1.24	CAMX	2.49	1.25	0.36	3.21	2173
		CHIM	1.10	-0.14	0.25	2.39	
		CMAQ	1.54	0.30	0.38	2.07	
		EMEP	1.17	-0.07	0.25	2.52	
		LOTO	0.96	-0.28	0.24	2.18	
		MINNI	2.22	0.98	0.33	2.90	
		RCG	ND	ND	ND	ND	
PM10	18.58	CAMX	10.68	-7.90	0.67	11.75	1231
		CHIM	12.07	-6.51	0.72	10.4	
		CMAQ	5.98	-12.6	0.29	16.82	
		EMEP	15.42	-3.16	0.7	10.67	
		LOTO	15.00	-3.58	0.54	10.46	
		MINNI	13.05	-5.53	0.58	10.99	
		RCG	ND	ND	ND	ND	
PM25	12.07	CAMX	11.39	-0.68	0.55	6.14	700
		CHIM	10.69	-1.38	0.51	6.59	
		CMAQ	5.16	-6.91	0.32	8.99	
		EMEP	11.92	-0.15	0.52	8.21	
		LOTO	12.89	0.82	0.46	6.47	
		MINNI	11.70	-0.37	0.50	5.92	
		RCG	ND	ND	ND	ND	

2007 campaign – All daily data

Pollutant	Obs.	Model name	Model val.	Bias	Cor.	RMSE	Nb.
O3	54.39	CAMX	74.90	20.51	0.65	24.42	3063
		CHIM	76.92	22.53	0.61	27.58	
		CMAQ	75.68	21.28	0.48	30.35	
		EMEP	67.63	13.23	0.61	19.72	
		LOTO	64.90	10.51	0.62	18.73	
		MINNI	58.57	4.18	0.63	15.03	
		RCG	ND	ND	ND	ND	
		MACCA	*62.35*	*7.95*	*0.56*	*19.29*	
NO2	7.77	CAMX	5.57	-2.20	0.75	5.77	2077
		CHIM	7.26	-0.52	0.72	6.33	
		CMAQ	11.29	3.52	0.65	11.77	
		EMEP	7.97	0.20	0.70	5.95	
		LOTO	7.36	-0.41	0.71	5.85	
		MINNI	8.23	0.46	0.71	5.95	
		RCG	ND	ND	ND	ND	
SO2	1.48	CAMX	3.08	1.60	0.63	3.15	2025
		CHIM	1.61	0.13	0.54	2.21	
		CMAQ	2.00	0.53	0.46	2.63	
		EMEP	1.65	0.18	0.62	2.02	
		LOTO	1.39	-0.08	0.54	2.13	
		MINNI	2.95	1.48	0.60	2.80	
		RCG	ND	ND	ND	ND	
PM10	14.71	CAMX	10.03	-4.69	0.41	11.26	1189
		CHIM	12.01	-2.71	0.57	8.96	
		CMAQ	11.23	-3.48	0.47	9.95	
		EMEP	16.52	1.81	0.53	10.38	
		LOTO	10.78	-3.93	0.47	9.71	
		MINNI	16.19	1.48	0.57	8.57	
		RCG	ND	ND	ND	ND	
PM25	11.29	CAMX	11.04	-0.25	0.60	8.79	696
		CHIM	10.29	-1.00	0.70	7.54	
		CMAQ	8.99	-2.30	0.68	8.35	
		EMEP	8.99	-2.30	0.58	8.9	
		LOTO	8.74	-2.55	0.58	8.94	
		MINNI	12.42	1.12	0.58	8.68	
		RCG	ND	ND	ND	ND	

2008 campaign – All daily data

Pollutant	Obs.	Model name	Model val.	Bias	Cor.	RMSE	Nb.
O3	49.81	CAMX	60.52	10.71	0.55	19.81	3253
		CHIM	56.13	6.31	0.58	16.54	
		CMAQ	62.60	12.79	0.52	21.21	
		EMEP	58.89	9.08	0.58	18.17	
		LOTO	48.71	-1.10	0.57	15.44	
		MINNI	55.02	5.21	0.52	17.45	
		RCG	56.92	7.11	0.57	16.93	
		MACCA	*51.04*	*1.23*	*0.60*	*15.53*	
NO2	6.66	CAMX	5.59	-1.07	0.72	4.67	2155
		CHIM	7.30	0.64	0.71	5.70	
		CMAQ	9.75	3.09	0.59	9.86	
		EMEP	6.76	0.10	0.72	4.81	
		LOTO	7.07	0.41	0.70	5.15	
		MINNI	7.45	0.79	0.73	5.07	
		RCG	5.89	-0.77	0.68	5.04	
SO2	1.28	CAMX	2.19	0.91	0.53	2.84	1797
		CHIM	0.82	-0.46	0.42	2.78	
		CMAQ	1.29	0.01	0.41	2.75	
		EMEP	1.14	-0.14	0.44	2.70	
		LOTO	0.81	-0.47	0.48	2.72	
		MINNI	2.20	0.92	0.48	2.85	
		RCG	1.94	0.66	0.35	3.04	
PM10	17.94	CAMX	13.06	-4.87	0.48	15.06	1377
		CHIM	11.35	-6.59	0.53	15.29	
		CMAQ	9.10	-8.83	0.32	17.61	
		EMEP	14.47	-3.47	0.47	14.66	
		LOTO	14.03	-3.90	0.52	14.34	
		MINNI	15.67	-2.27	0.42	14.73	
		RCG	14.05	-3.89	0.58	13.65	
PM25	10.74	CAMX	11.83	1.09	0.58	8.09	728
		CHIM	8.83	-1.91	0.59	6.59	
		CMAQ	6.70	-4.04	0.44	8.37	
		EMEP	10.61	-0.13	0.58	7.21	
		LOTO	11.16	0.42	0.56	6.89	
		MINNI	12.80	2.06	0.56	7.52	
		RCG	10.58	-0.15	0.51	7.54	

2009 campaign – All daily data

Pollutant	Obs.	Model name	Model val.	Bias	Cor.	RMSE	Nb.
O3	69.80	CAMX	63.47	-6.34	0.59	16.95	3350
		CHIM	65.28	-4.53	0.56	16.01	
		CMAQ	61.91	-7.89	0.42	21.87	
		EMEP	62.13	-7.68	0.55	17.60	
		LOTO	57.99	-11.81	0.57	19.21	
		MINNI	53.77	-16.03	0.61	21.87	
		RCG	57.50	-12.30	0.64	18.67	
		MACCA	*49.82*	*-19.98*	*0.59*	*25.66*	
NO2	7.53	CAMX	5.57	-1.96	0.70	5.95	2284
		CHIM	6.89	-0.64	0.68	6.16	
		CMAQ	10.64	3.11	0.60	9.75	
		EMEP	7.28	-0.24	0.67	6.12	
		LOTO	6.58	-0.95	0.67	6.05	
		MINNI	8.01	0.48	0.69	6.23	
		RCG	6.46	-1.07	0.65	6.21	
SO2	1.28	CAMX	2.24	0.97	0.54	2.37	1637
		CHIM	0.93	-0.35	0.48	1.92	
		CMAQ	1.48	0.21	0.46	2.04	
		EMEP	1.10	-0.17	0.43	2.00	
		LOTO	1.00	-0.27	0.51	1.87	
		MINNI	2.40	1.13	0.50	2.42	
		RCG	2.52	1.24	0.44	2.71	
PM10	17.17	CAMX	11.90	-5.27	0.41	15.31	1448
		CHIM	12.83	-4.35	0.51	14.06	
		CMAQ	12.25	-4.93	0.32	15.71	
		EMEP	12.69	-4.48	0.62	13.03	
		LOTO	11.84	-5.33	0.48	14.75	
		MINNI	18.24	1.07	0.42	14.18	
		RCG	15.17	-2.00	0.41	14.35	
PM25	12.84	CAMX	10.90	-1.95	0.63	8.58	963
		CHIM	10.45	-2.39	0.69	8.05	
		CMAQ	9.26	-3.58	0.55	9.67	
		EMEP	8.68	-4.16	0.68	8.82	
		LOTO	8.60	-4.25	0.58	9.68	
		MINNI	13.46	0.62	0.64	8.19	
		RCG	11.26	-1.58	0.54	9.04	

2006 campaign – 10% highest daily concentrations

Pollutant	Obs.	Model name	Model val.	Bias	Cor.	RMSE	Nb.
O3	108.86	CAMX	113.6	4.73	0.48	19.52	424
		CHIM	87.11	-21.76	0.19	30.50	
		CMAQ	92.76	-16.11	0.06	29.94	
		EMEP	93.24	-15.63	0.40	24.86	
		LOTO	88.28	-20.59	0.41	27.94	
		MINNI	104.9	-3.96	0.42	20.09	
		RCG	ND	ND	ND	ND	
NO2	7.62	CAMX	3.59	-4.04	0.76	6.35	348
		CHIM	6.51	-1.11	0.75	6.19	
		CMAQ	6.95	-0.67	0.73	5.95	
		EMEP	4.66	-2.96	0.75	5.62	
		LOTO	4.93	-2.69	0.74	5.66	
		MINNI	4.56	-3.07	0.78	5.53	
		RCG	ND	ND	ND	ND	
SO2	2.96	CAMX	3.76	0.79	0.35	4.00	308
		CHIM	1.61	-1.35	0.25	3.80	
		CMAQ	2.18	-0.78	0.38	3.15	
		EMEP	1.85	-1.11	0.22	4.31	
		LOTO	1.45	-1.51	0.22	3.61	
		MINNI	3.06	0.10	0.32	3.99	
		RCG	ND	ND	ND	ND	
PM10	35.00	CAMX	17.83	-17.17	0.62	22.59	152
		CHIM	20.54	-14.46	0.58	20.68	
		CMAQ	6.49	-28.51	0.42	33.24	
		EMEP	29.45	-5.54	0.63	21.46	
		LOTO	20.73	-14.27	0.37	22.06	
		MINNI	18.34	-16.66	0.55	22.66	
		RCG	ND	ND	ND	ND	
PM25	19.80	CAMX	17.46	-2.33	0.33	7.60	94
		CHIM	16.55	-3.25	0.26	9.43	
		CMAQ	6.22	-13.58	0.43	14.65	
		EMEP	21.92	2.13	0.26	14.30	
		LOTO	18.04	-1.76	0.19	7.54	
		MINNI	15.98	-3.81	0.33	8.04	
		RCG	ND	ND	ND	ND	

2007 campaign – 10% highest daily concentrations

Pollutant	Obs.	Model name	Model val.	Bias	Cor.	RMSE	Nb.
O3	70.13	CAMX	85.24	15.11	0.39	18.93	345
		CHIM	88.66	18.53	0.10	24.78	
		CMAQ	89.16	19.03	-0.10	29.86	
		EMEP	78.28	8.15	0.30	15.57	
		LOTO	76.90	6.77	0.22	17.65	
		MINNI	70.13	0.00	0.37	14.24	
		RCG	ND	ND	ND	ND	
NO2	16.59	CAMX	9.05	-7.54	0.73	10.94	232
		CHIM	11.65	-4.95	0.69	10.53	
		CMAQ	17.98	1.39	0.66	14.33	
		EMEP	12.67	-3.93	0.67	9.83	
		LOTO	11.17	-5.43	0.67	10.27	
		MINNI	13.03	-3.57	0.68	9.45	
		RCG	ND	ND	ND	ND	
SO2	3.49	CAMX	5.11	1.62	0.64	4.24	233
		CHIM	2.89	-0.60	0.49	3.94	
		CMAQ	3.30	-0.19	0.46	4.10	
		EMEP	2.79	-0.70	0.59	3.58	
		LOTO	2.48	-1.01	0.44	4.13	
		MINNI	4.58	1.09	0.59	3.89	
		RCG	ND	ND	ND	ND	
PM10	27.40	CAMX	15.72	-11.68	0.28	18.13	142
		CHIM	17.84	-9.56	0.50	14.90	
		CMAQ	15.58	-11.82	0.47	16.13	
		EMEP	24.73	-2.67	0.35	15.41	
		LOTO	14.02	-13.37	0.34	17.63	
		MINNI	22.50	-4.89	0.36	12.94	
		RCG	ND	ND	ND	ND	
PM25	22.35	CAMX	18.71	-3.65	0.49	14.27	84
		CHIM	16.87	-5.48	0.67	12.72	
		CMAQ	14.60	-7.75	0.71	13.39	
		EMEP	14.37	-7.98	0.37	16.48	
		LOTO	13.39	-8.96	0.48	16.24	
		MINNI	19.34	-3.01	0.45	14.20	
		RCG	ND	ND	ND	ND	

2008 campaign – 10% highest daily concentrations

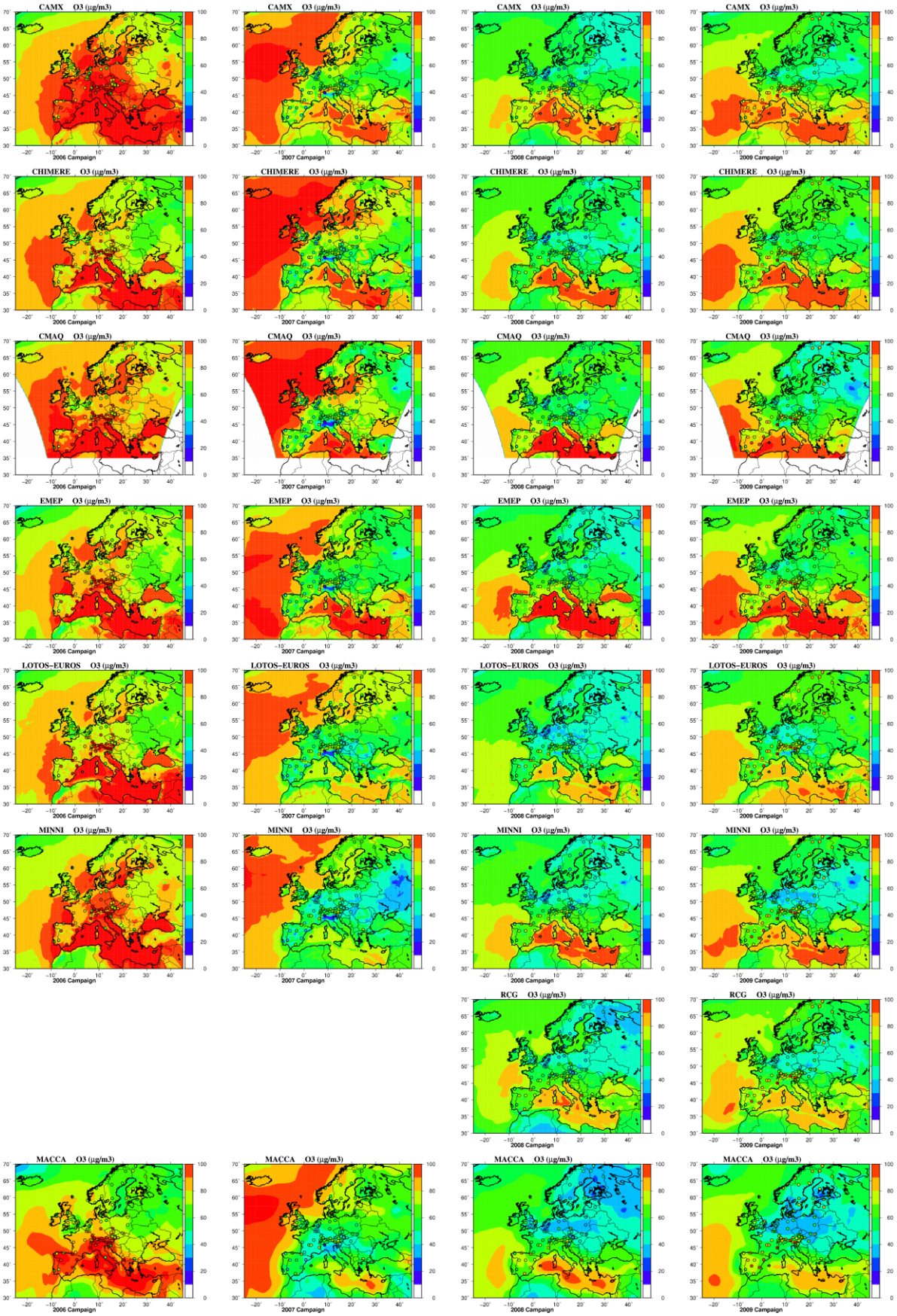
Pollutant	Obs.	Model name	Model val.	Bias	Cor.	RMSE	Nb.
O3	67.09	CAMX	69.72	2.63	0.68	13.38	350
		CHIM	63.29	-3.79	0.34	16.84	
		CMAQ	69.78	2.69	0.35	18.07	
		EMEP	67.77	0.68	0.60	14.43	
		LOTO	55.38	-11.71	0.52	18.83	
		MINNI	62.49	-4.59	0.64	14.13	
		RCG	64.63	-2.46	0.59	13.78	
NO2	10.95	CAMX	7.41	-3.54	0.77	6.88	261
		CHIM	9.62	-1.33	0.76	7.18	
		CMAQ	13.58	2.63	0.70	10.93	
		EMEP	9.09	-1.85	0.76	6.58	
		LOTO	8.40	-2.55	0.77	6.6	
		MINNI	9.71	-1.23	0.76	6.55	
		RCG	7.40	-3.55	0.75	7.11	
SO2	2.55	CAMX	2.88	0.33	0.60	3.94	227
		CHIM	1.05	-1.49	0.50	4.68	
		CMAQ	1.79	-0.76	0.45	4.47	
		EMEP	1.67	-0.88	0.53	4.29	
		LOTO	1.12	-1.43	0.55	4.53	
		MINNI	2.78	0.23	0.55	4.10	
		RCG	2.34	-0.20	0.45	4.40	
PM10	42.74	CAMX	24.66	-18.07	0.14	36.92	152
		CHIM	18.70	-24.04	0.29	38.80	
		CMAQ	15.48	-27.26	-0.05	43.23	
		EMEP	24.42	-18.32	0.14	37.18	
		LOTO	21.52	-21.22	0.44	36.18	
		MINNI	23.68	-19.06	0.07	37.71	
		RCG	25.49	-17.25	0.38	34.16	
PM25	21.69	CAMX	20.05	-1.64	0.46	13.00	86
		CHIM	13.17	-8.52	0.59	13.44	
		CMAQ	10.53	-11.16	0.19	17.63	
		EMEP	17.59	-4.10	0.45	13.26	
		LOTO	17.21	-4.48	0.44	12.62	
		MINNI	18.69	-3.00	0.41	12.70	
		RCG	18.22	-3.47	0.27	15.09	

2009 campaign – 10% highest daily concentrations

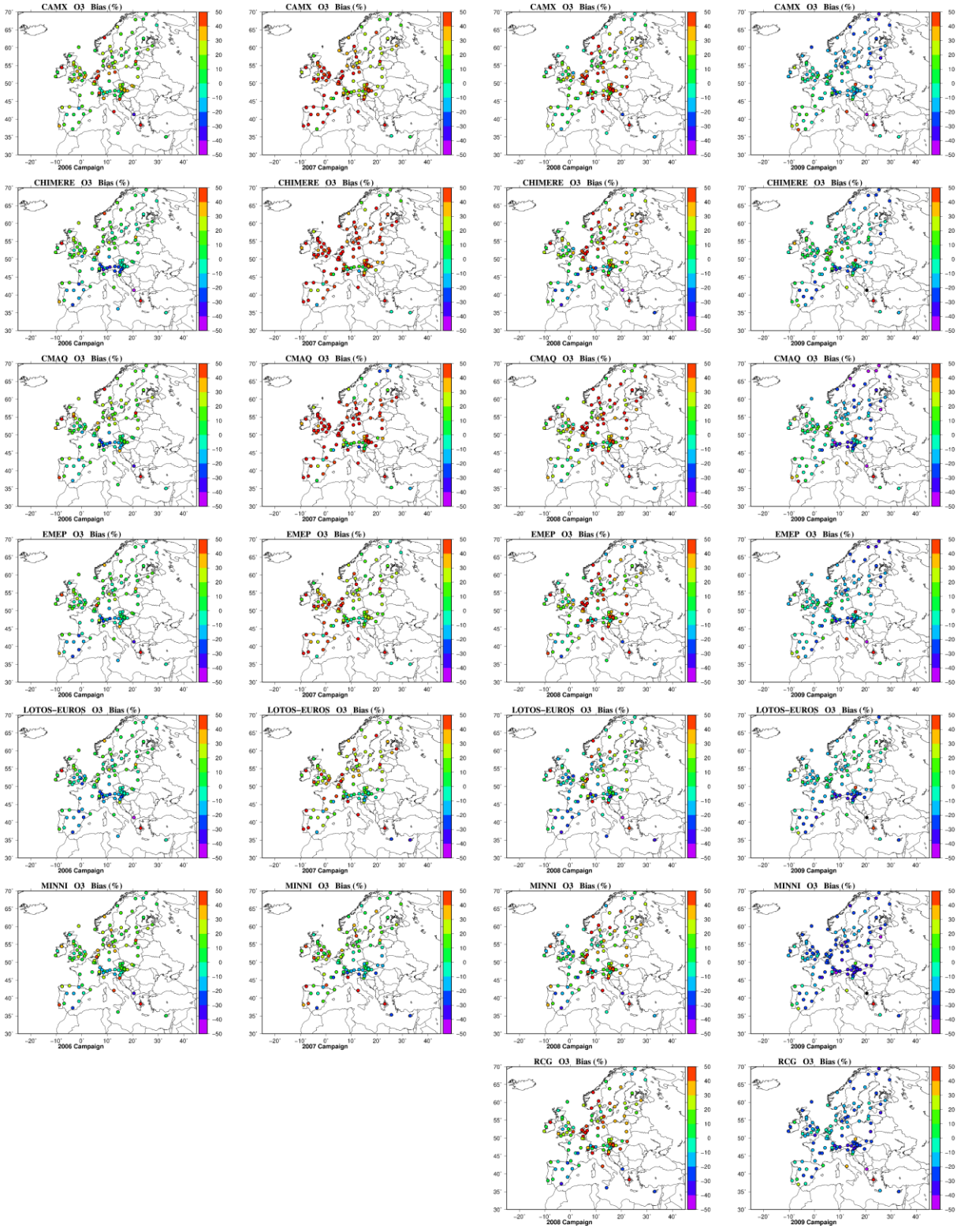
Pollutant	Obs.	Model name	Model val.	Bias	Cor.	RMSE	Nb.
O3	86.63	CAMX	74.45	-12.18	0.55	17.89	428
		CHIM	75.63	-11.00	0.12	19.21	
		CMAQ	72.31	-14.33	0.06	25.24	
		EMEP	72.35	-14.29	0.40	19.72	
		LOTO	67.74	-18.89	0.32	23.55	
		MINNI	64.00	-22.64	0.48	26.07	
		RCG	67.2	-19.44	0.47	23.28	
NO2	14.24	CAMX	8.19	-6.05	0.65	10.08	313
		CHIM	10.23	-4.01	0.65	9.57	
		CMAQ	17.12	2.88	0.59	12.44	
		EMEP	10.40	-3.85	0.63	9.43	
		LOTO	8.74	-5.5	0.64	9.93	
		MINNI	10.72	-3.52	0.64	9.44	
		RCG	8.60	-5.64	0.59	10.48	
SO2	2.63	CAMX	3.57	0.94	0.53	3.56	224
		CHIM	1.40	-1.23	0.43	3.56	
		CMAQ	2.31	-0.32	0.51	3.27	
		EMEP	1.85	-0.79	0.36	3.60	
		LOTO	1.57	-1.07	0.46	3.44	
		MINNI	3.39	0.76	0.50	3.46	
		RCG	3.45	0.81	0.50	3.61	
PM10	36.28	CAMX	22.92	-13.36	0.10	34.42	184
		CHIM	19.67	-16.61	0.29	33.95	
		CMAQ	20.11	-16.17	0.03	36.13	
		EMEP	20.94	-15.33	0.61	30.17	
		LOTO	17.33	-18.95	0.29	35.25	
		MINNI	25.86	-10.42	0.19	32.27	
		RCG	22.99	-13.29	0.18	33.42	
PM25	27.85	CAMX	21.46	-6.39	0.34	16.42	122
		CHIM	17.89	-9.96	0.50	16.59	
		CMAQ	17.62	-10.23	0.33	18.61	
		EMEP	17.01	-10.84	0.48	17.29	
		LOTO	14.33	-13.52	0.37	19.66	
		MINNI	22.53	-5.32	0.40	15.26	
		RCG	18.95	-8.91	0.30	17.39	

S2 : Supplementary material for Individual model performances on Ozone concentrations

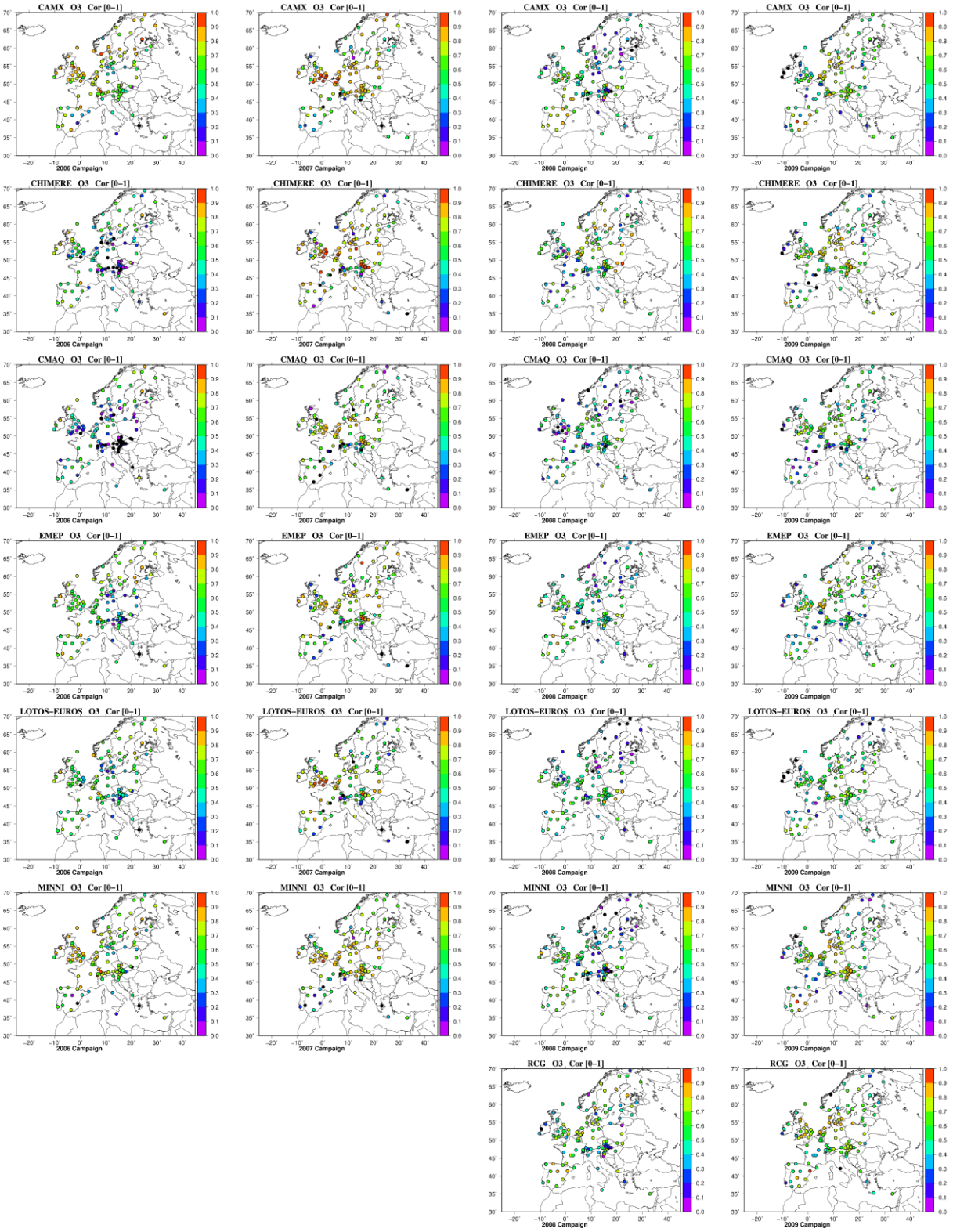
Averaged ozone concentrations for individual models for each campaign



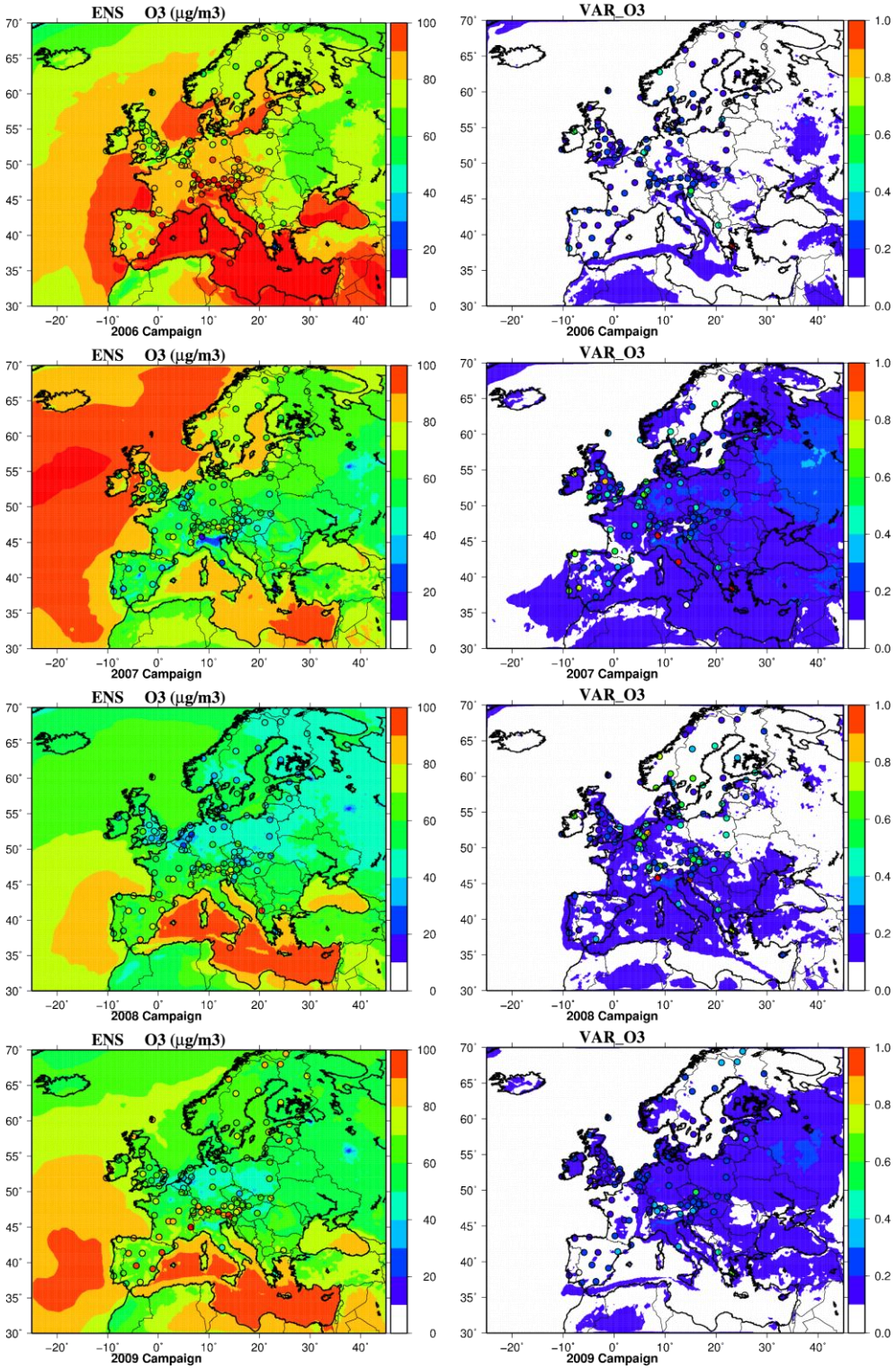
Averaged ozone bias for individual models for each campaign (black dots refer to value below the minimum color scale value)



Ozone time correlations for individual models for each campaign (black dots refer to value below the minimum color scale value)

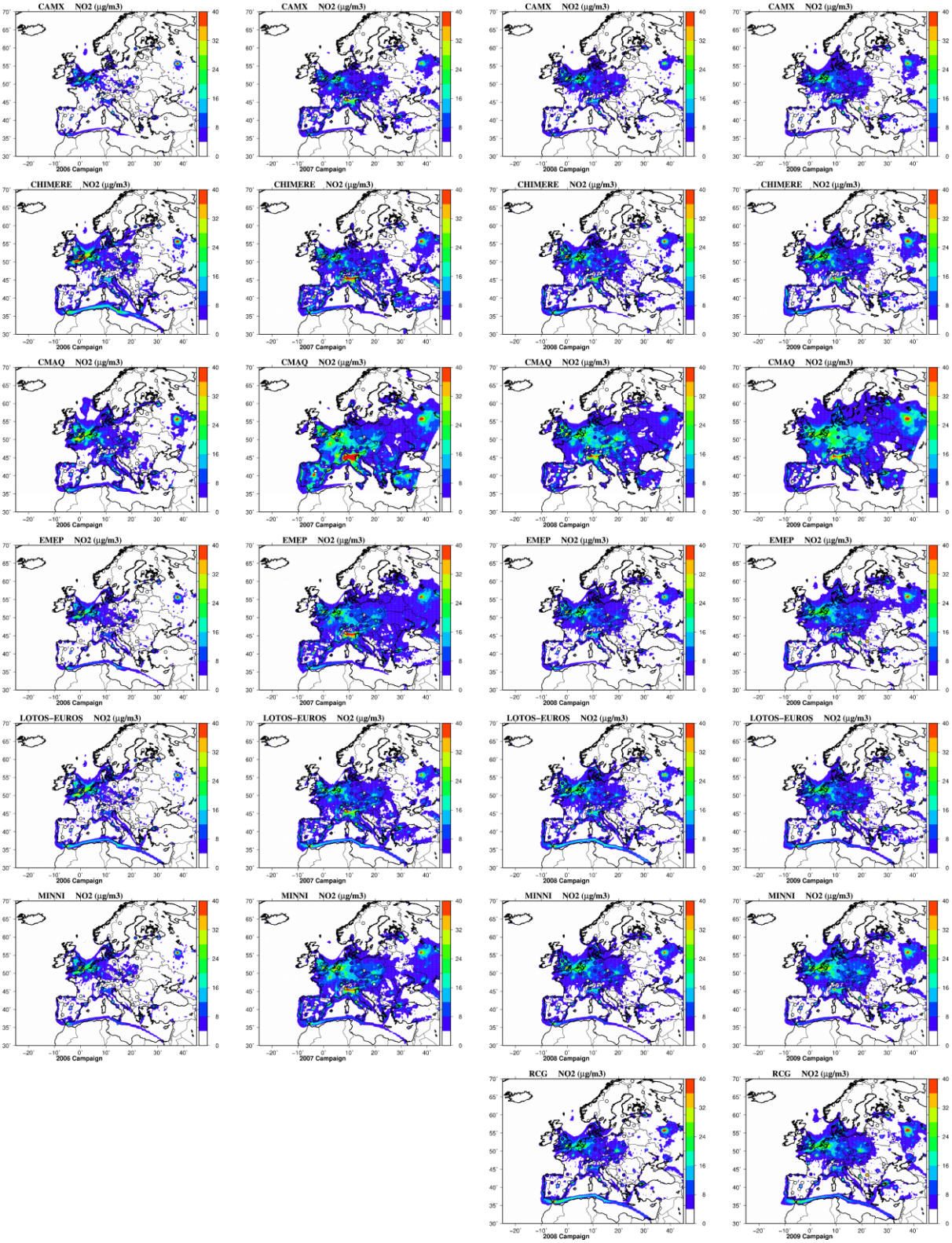


***Left column*: Average O_3 concentrations (µg m^{-3}) of the "ensemble" (ENS) for the four campaigns with corresponding observations (coloured dots). *Right column*: coefficient of variation of models (no unit) constituting the ensemble with corresponding normalized root mean square errors of the "ensemble" (coloured dots).**

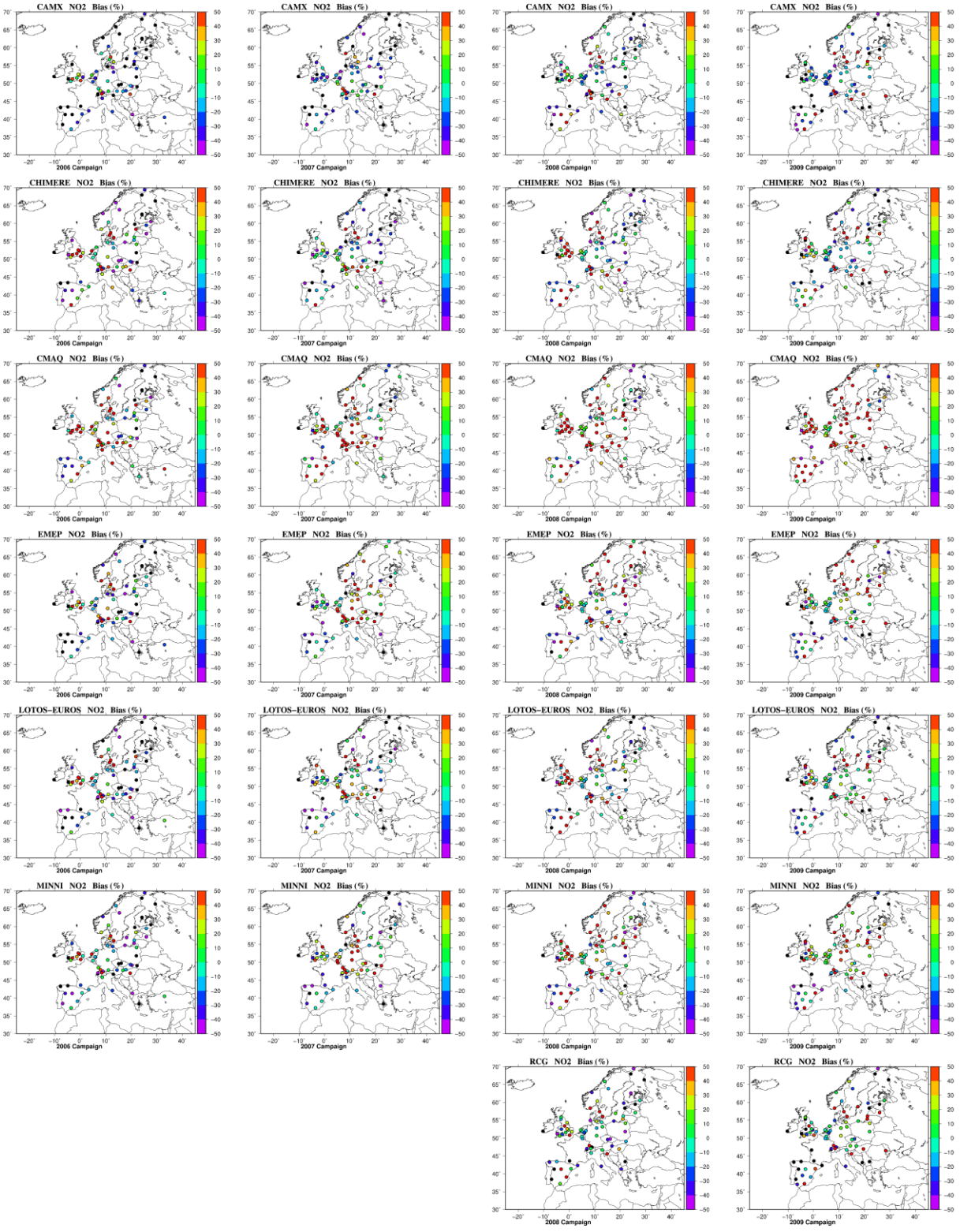


S3 : Supplementary material for Individual model performances on Nitrogen Dioxide concentrations

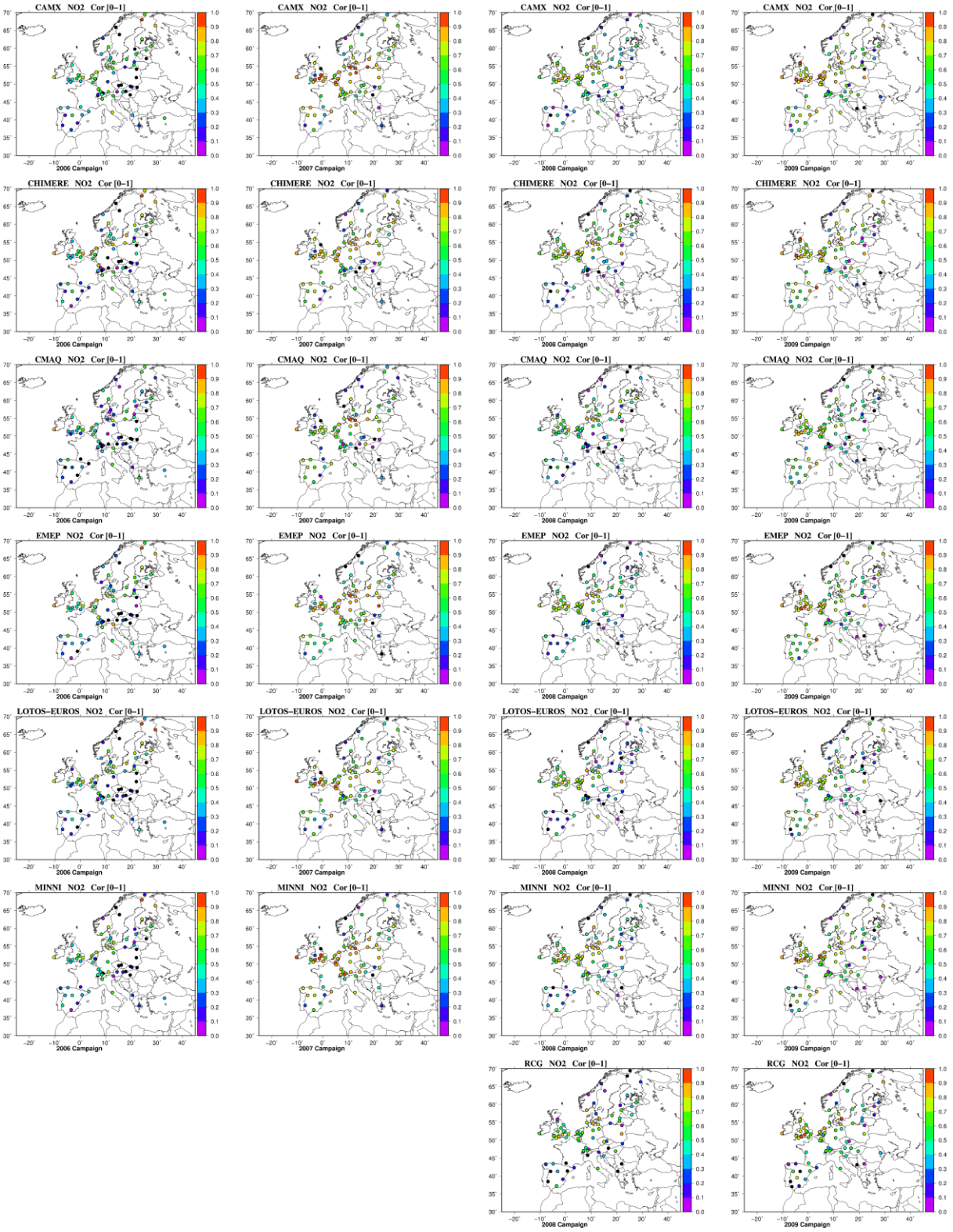
Average nitrogen dioxide concentrations for individual models for each campaign



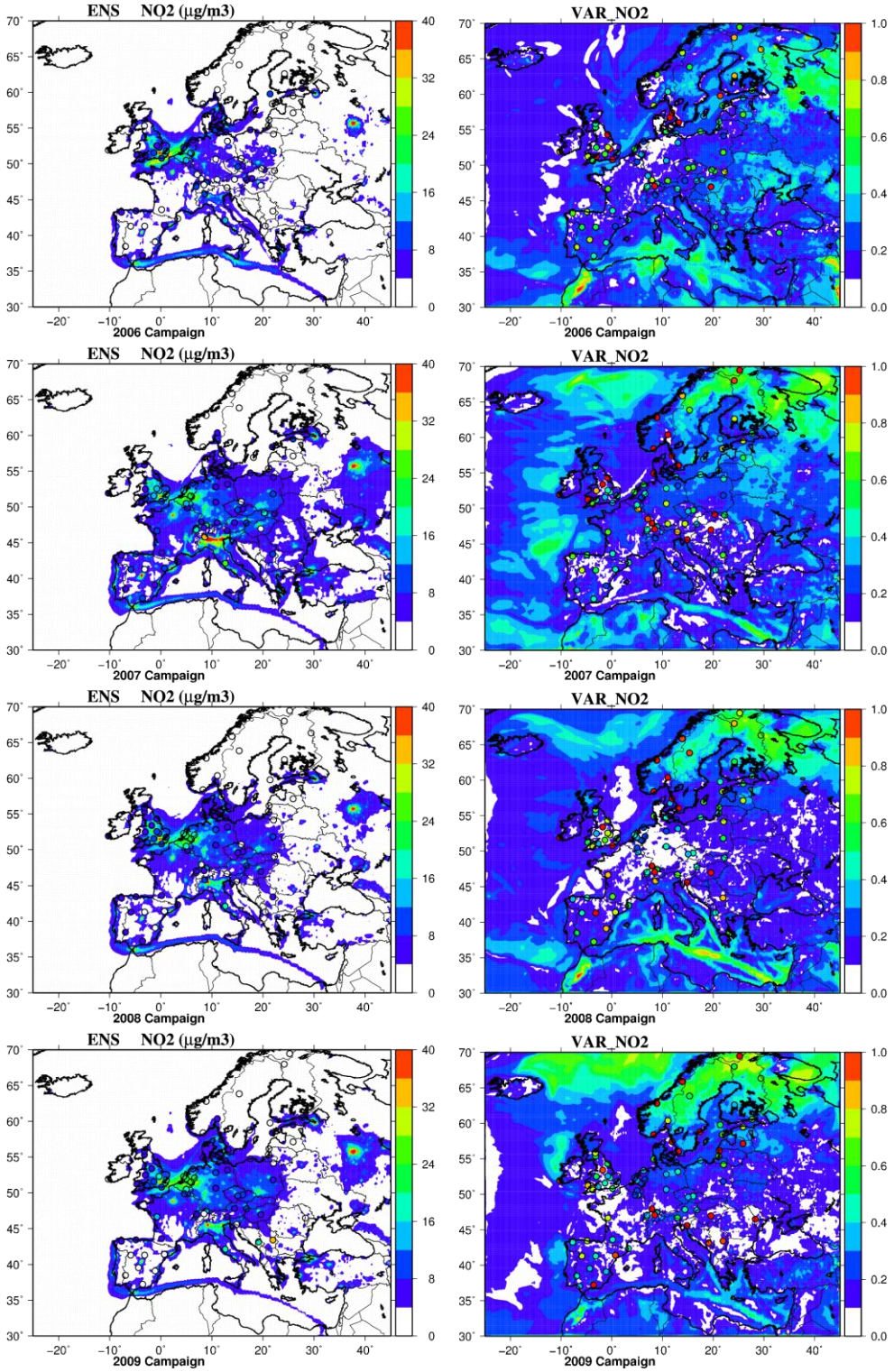
Averaged ozone bias for individual models for each campaign (black dots refer to value below the minimum color scale value)



Nitrogen dioxide time correlations for individual models for each campaign (black dots refer to value below the minimum color scale value)

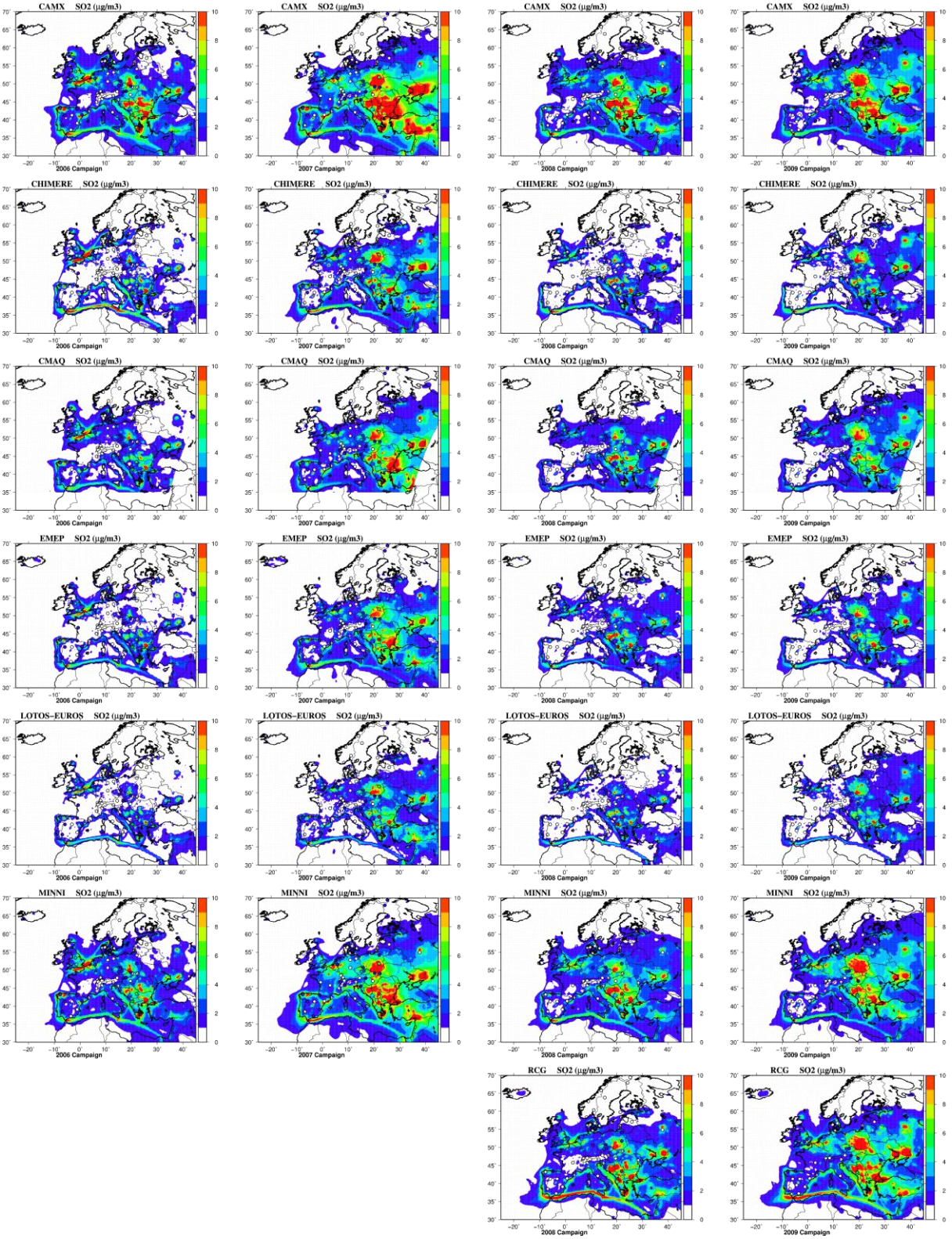


***Left column*: Average NO_2 concentrations (µg m^{-3}) of the "ensemble" (ENS) for the four campaigns with corresponding observations (coloured dots). *Right column*: coefficient of variation of models (no unit) constituting the ensemble with corresponding normalized root mean square errors of the "ensemble" (coloured dots).**

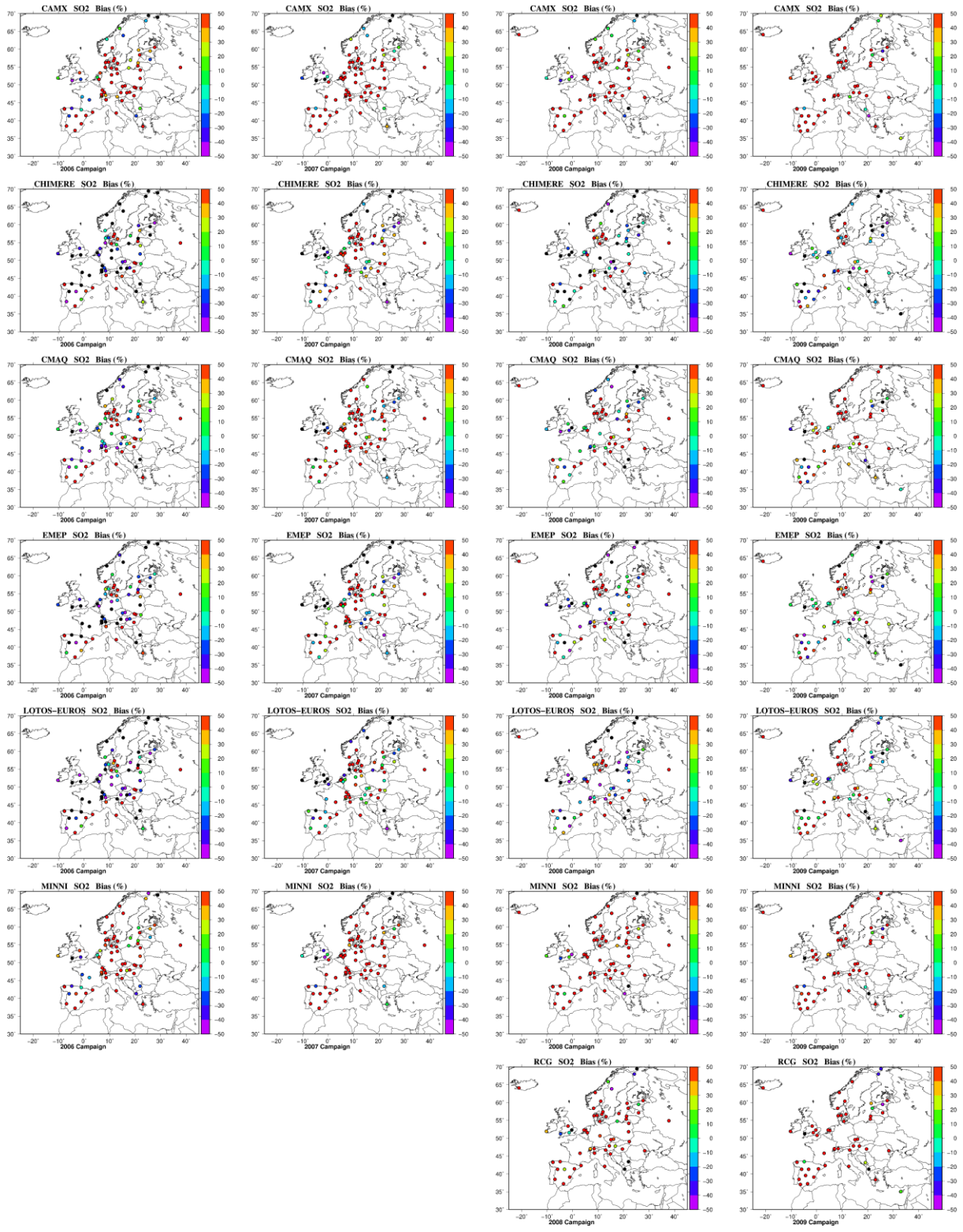


S4 : Supplementary material for Individual model performances on Sulphur Dioxide concentrations

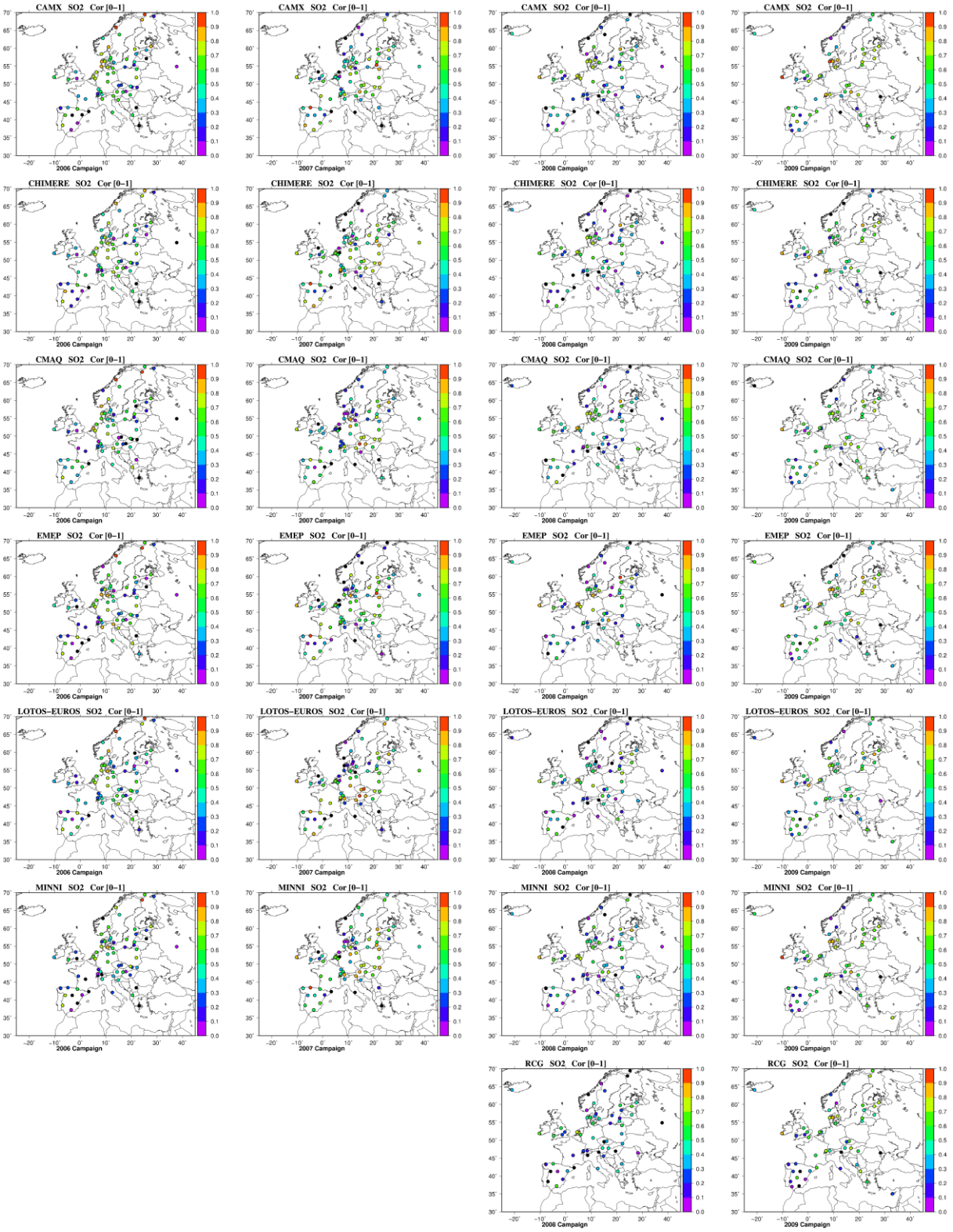
Average SO2 concentrations for individual models for each campaign



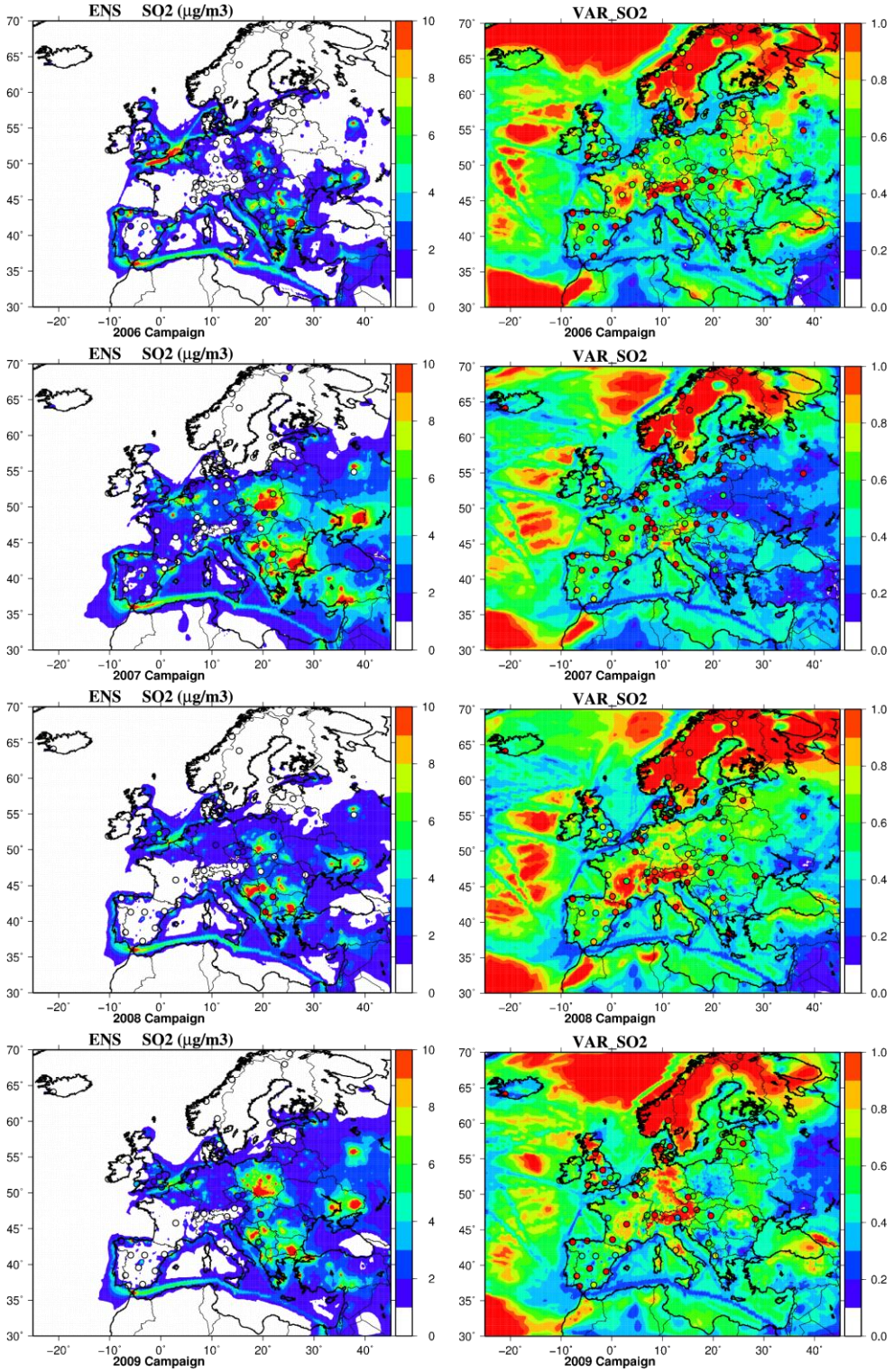
Averaged SO2 bias for individual models for each campaign (black dots refer to value below the minimum color scale value)



SO2 time correlations for individual models for each campaign (black dots refer to value below the minimum color scale value)

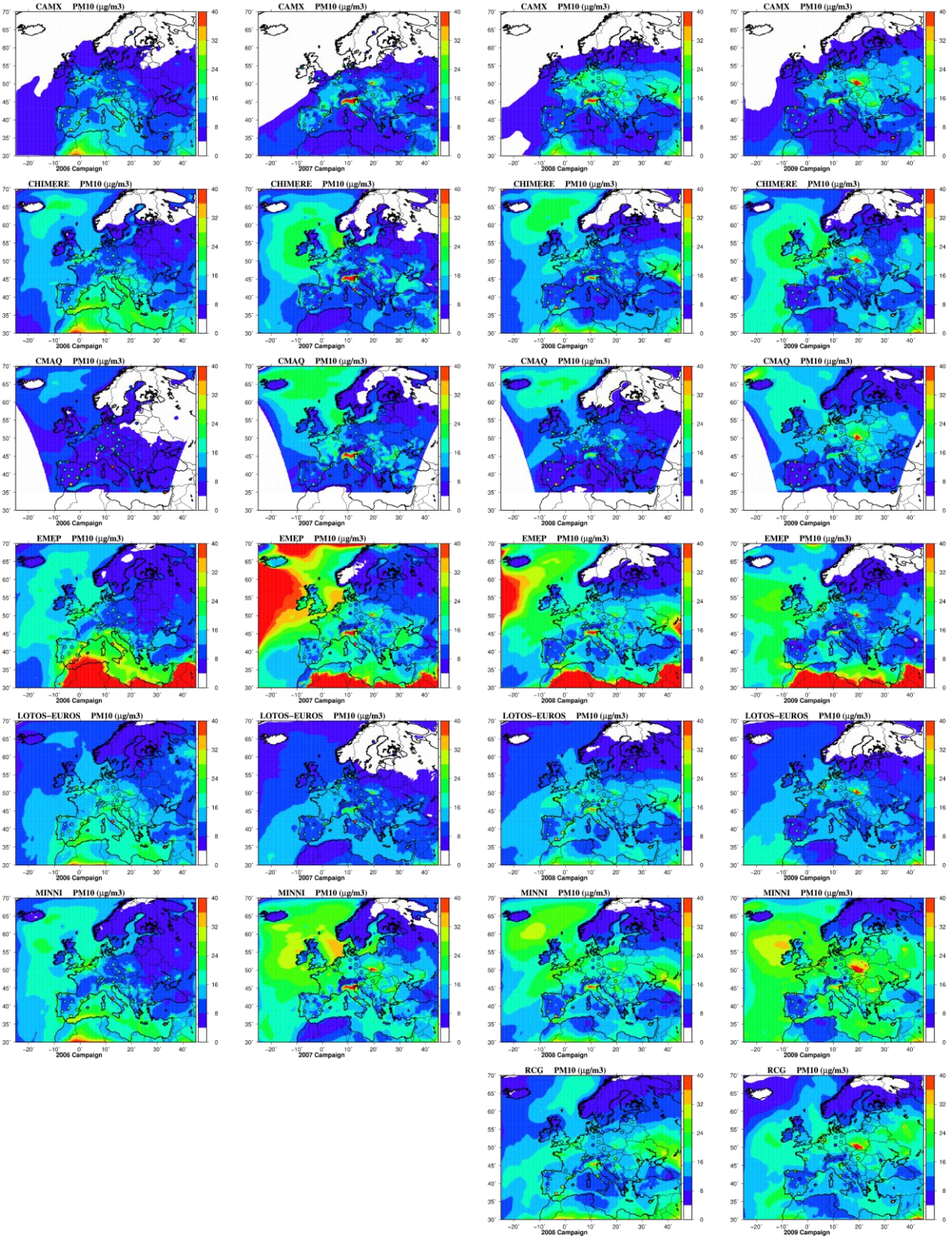


***Left column*: Average SO2 concentrations (µg m^{-3}) of the "ensemble" (ENS) for the four campaigns with corresponding observations (coloured dots). *Right column*: coefficient of variation of models (no unit) constituting the ensemble with corresponding normalized root mean square errors of the "ensemble" (coloured dots).**

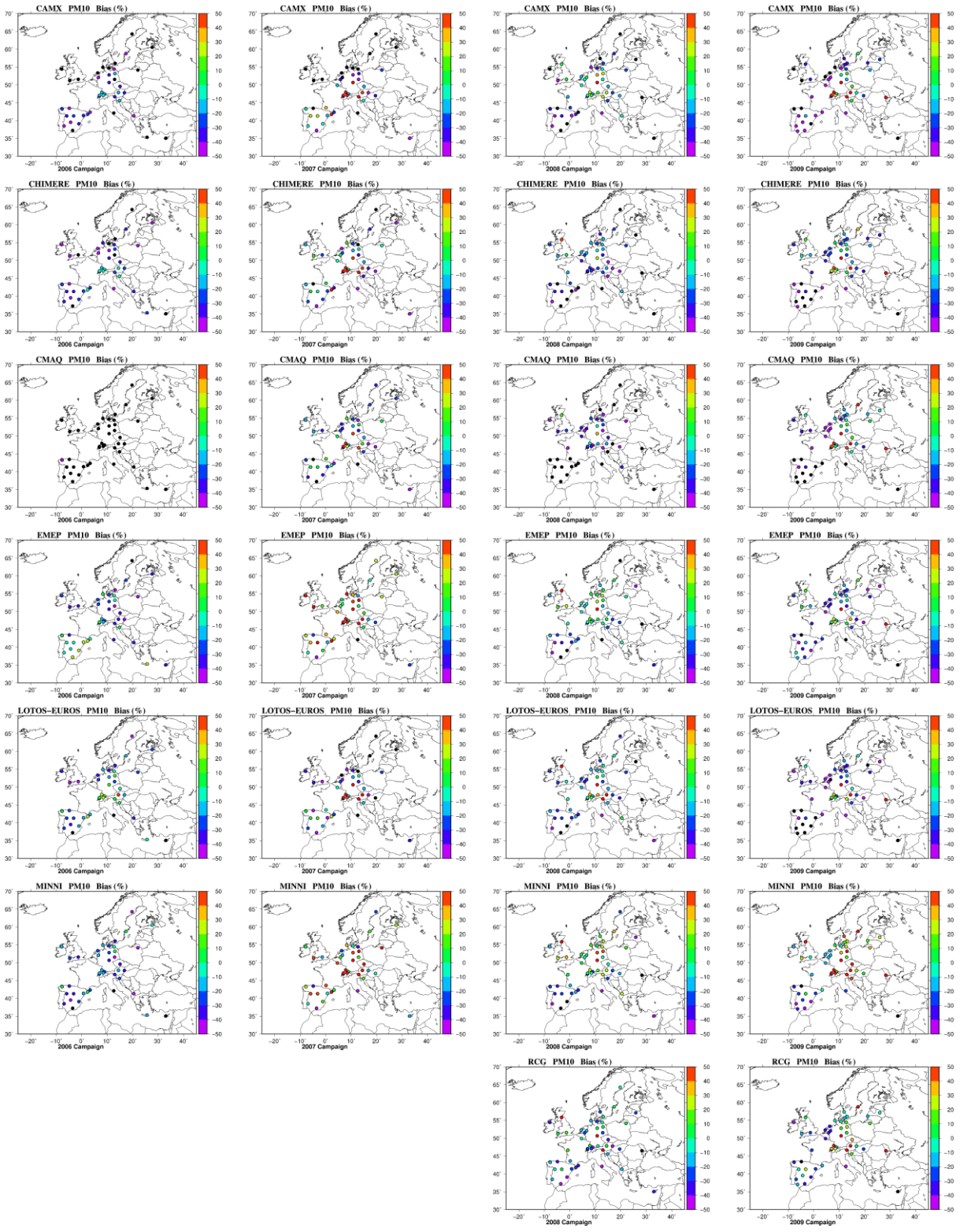


S5: Supplementary material for Individual model performances on PM_{10} concentrations

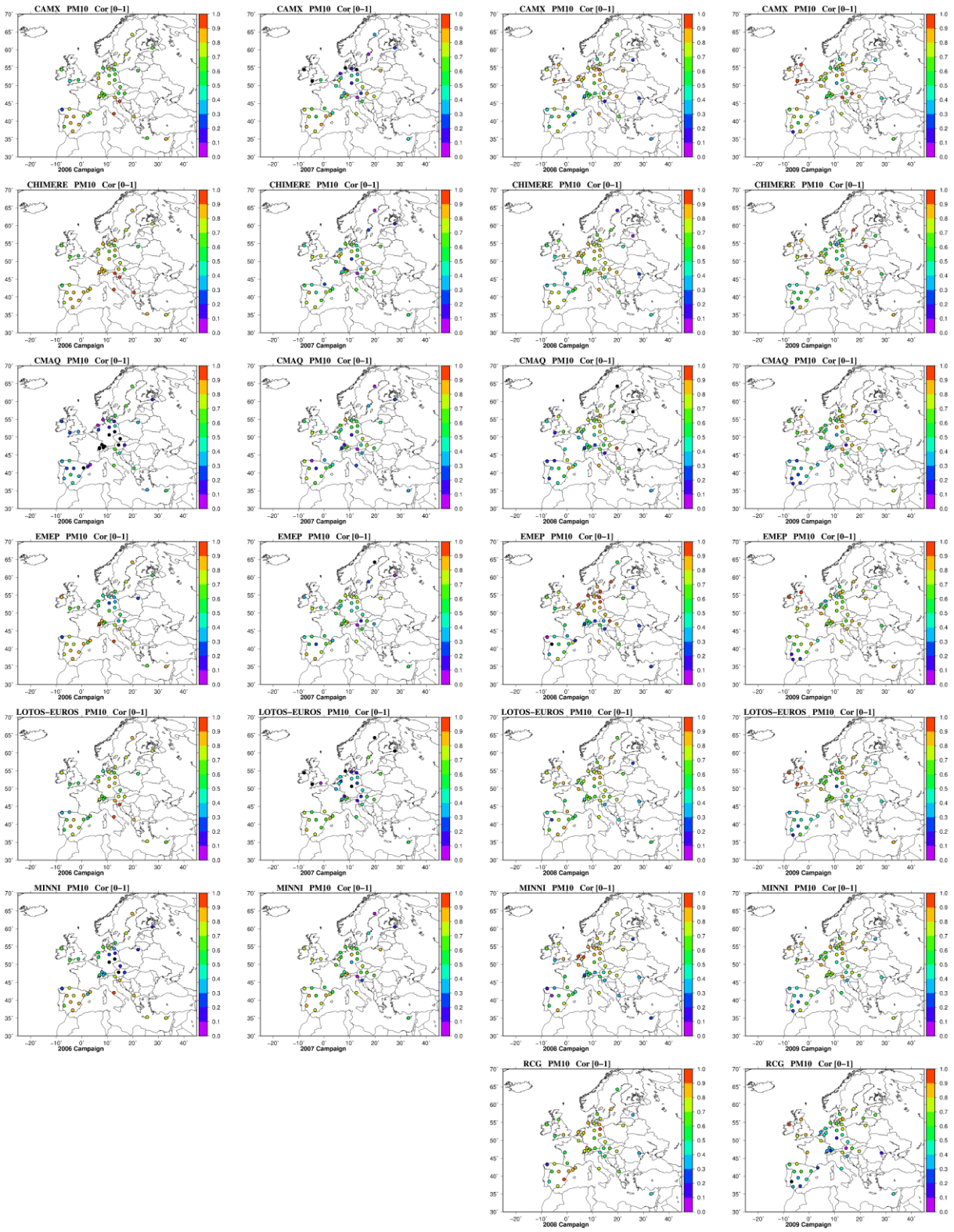
Average PM_{10} concentrations for individual models for each campaign



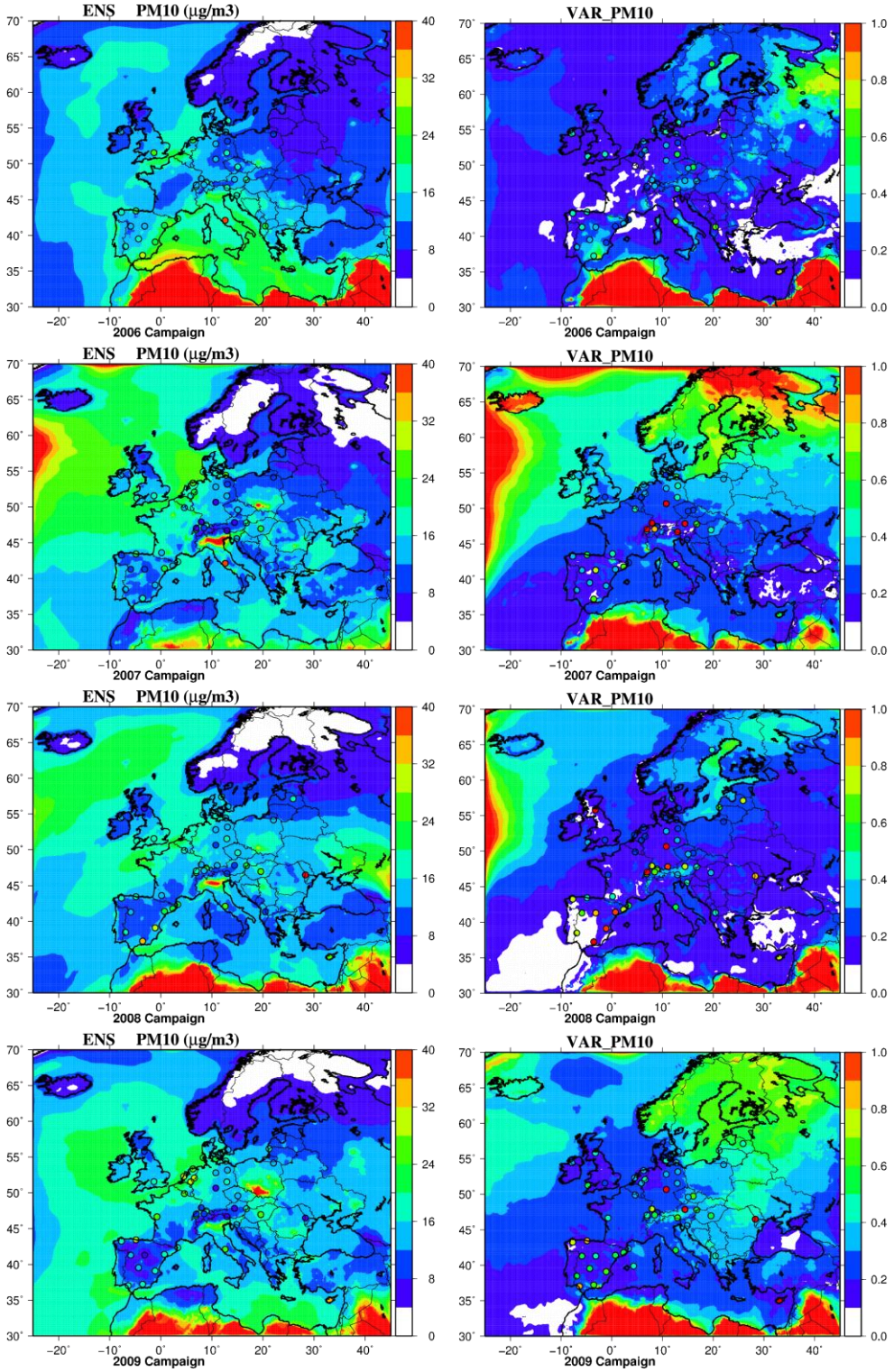
Averaged PM_{10} bias for individual models for each campaign (black dots refer to value below the minimum color scale value)



PM_{10} time correlations for individual models for each campaign (black dots refer to value below the minimum color scale value)

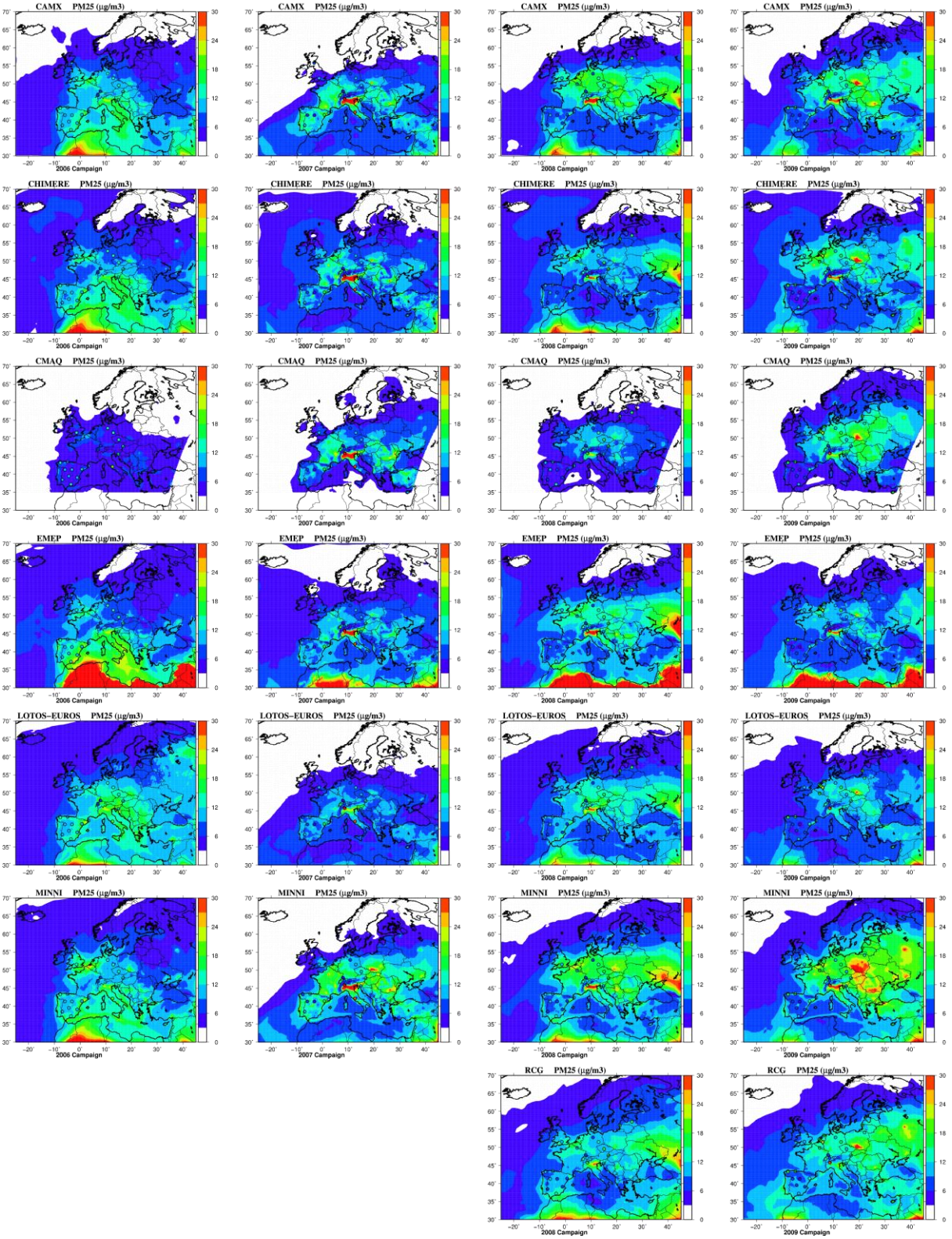


***Left column*: Average PM_{10} concentrations (µg m^{-3}) of the "ensemble" (ENS) for the four campaigns with corresponding observations (coloured dots). *Right column*: coefficient of variation of models (no unit) constituting the ensemble with corresponding normalized root mean square errors of the "ensemble" (coloured dots).**

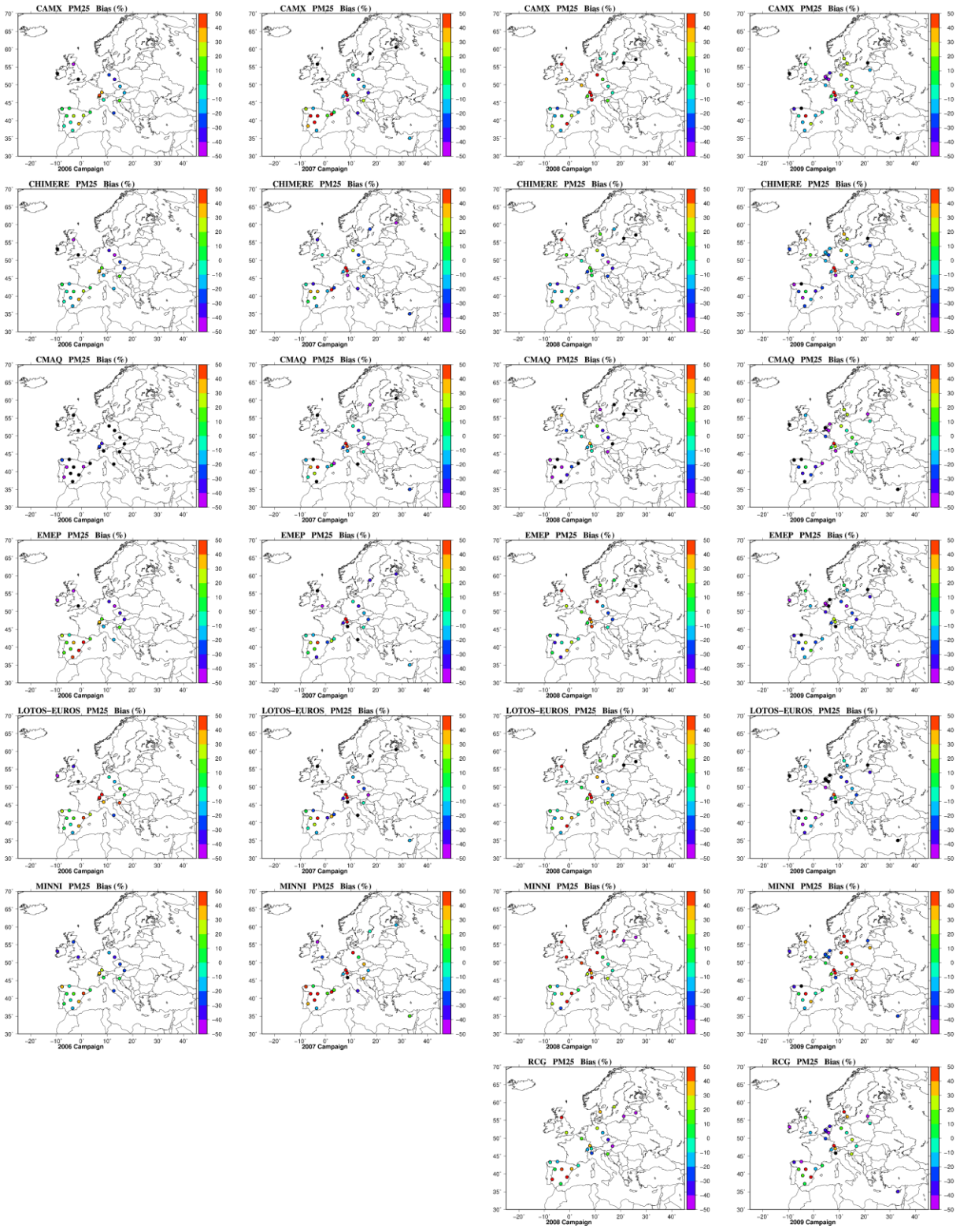


S6 : Supplementary material for Individual model performances on $PM_{2.5}$ concentrations

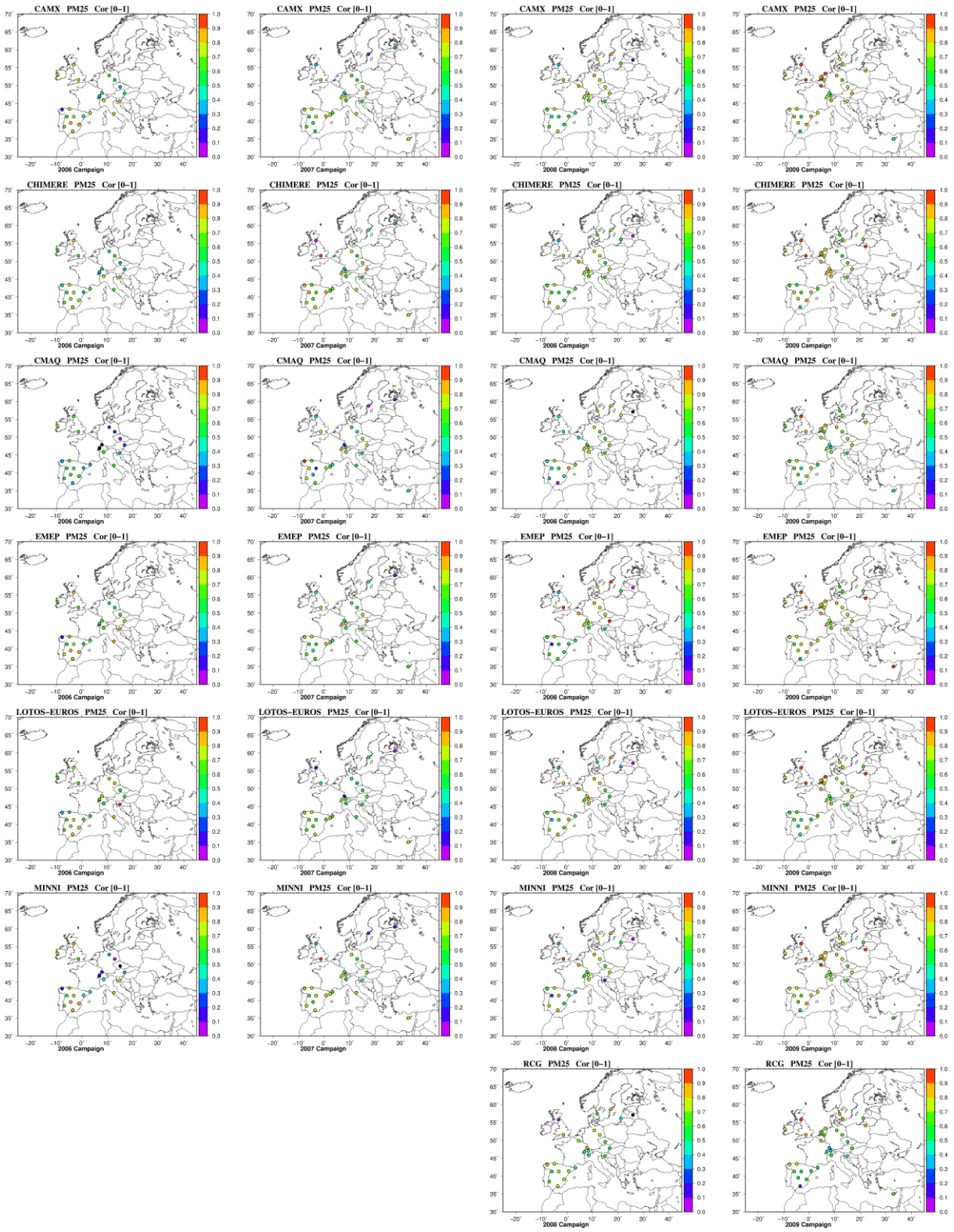
Average $PM_{2.5}$ concentrations for individual models for each campaign



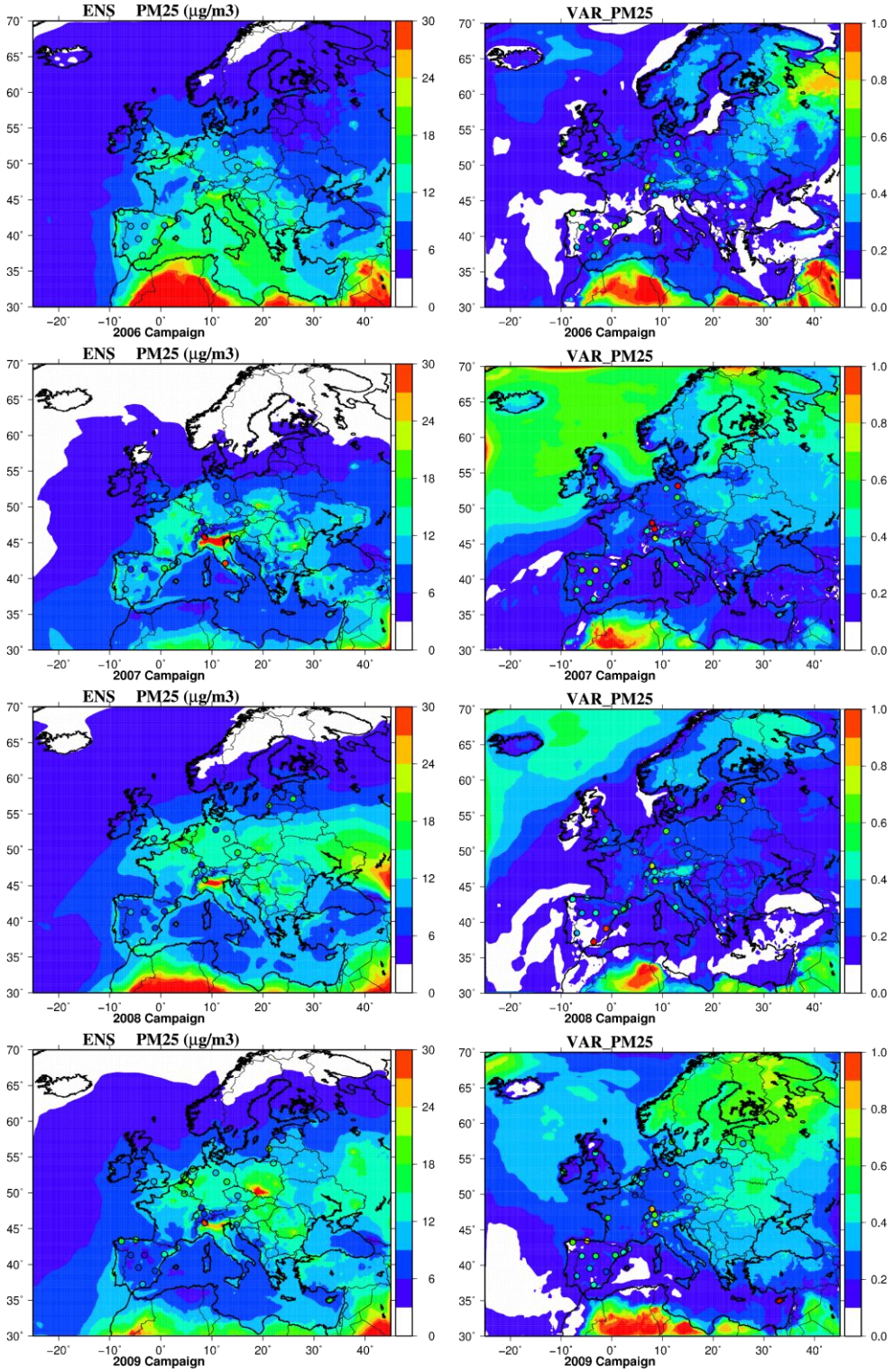
Averaged $PM_{2.5}$ bias for individual models for each campaign (black dots refer to value below the minimum color scale value)



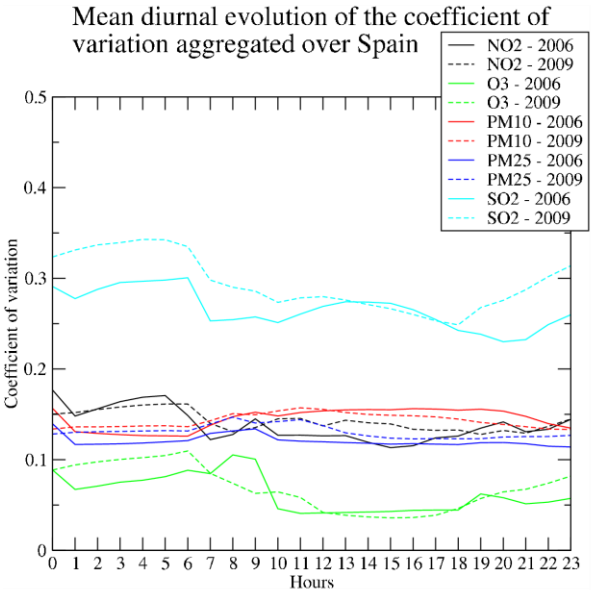
$PM_{2.5}$ time correlations for individual models for each campaign (black dots refer to value below the minimum color scale value)

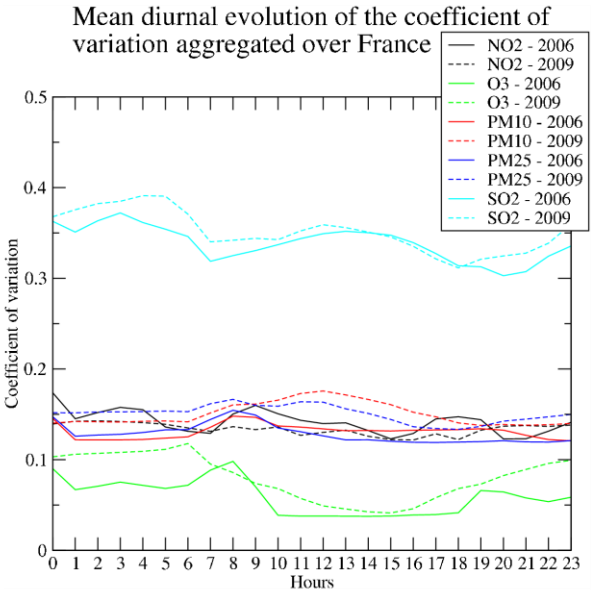


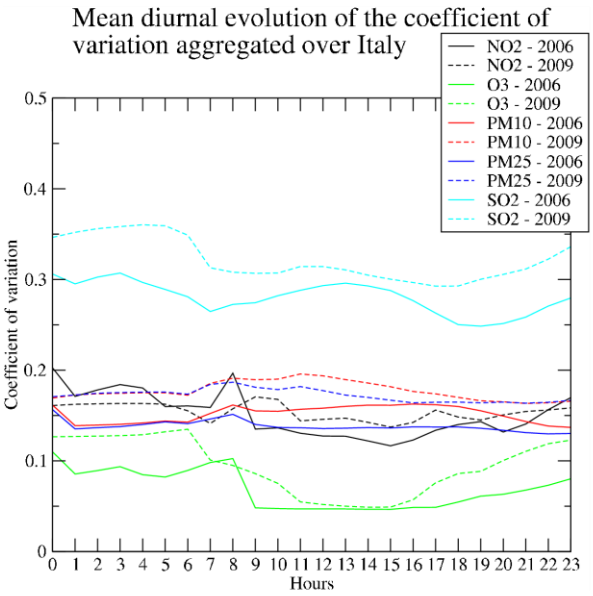
***Left column*: Average $PM_{2.5}$ concentrations (µg m^{-3}) of the "ensemble" (ENS) for the four campaigns with corresponding observations (coloured dots). *Right column*: coefficient of variation of models (no unit) constituting the ensemble with corresponding normalized root mean square errors of the "ensemble" (coloured dots).**

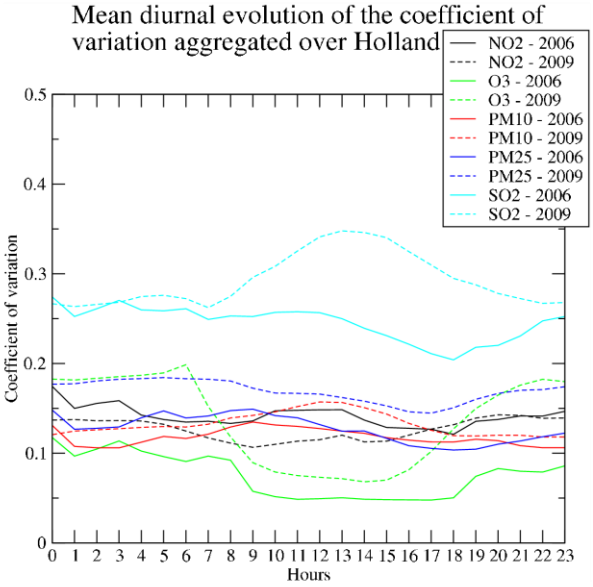


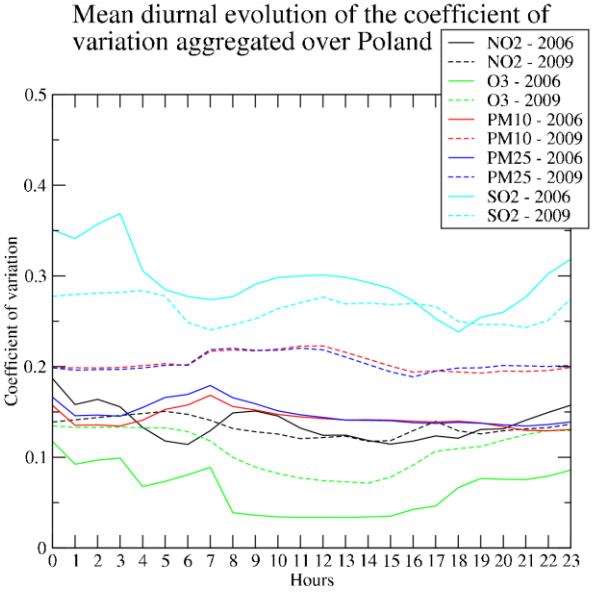
S7: Diurnal evolution of the coefficient of variation over different countries

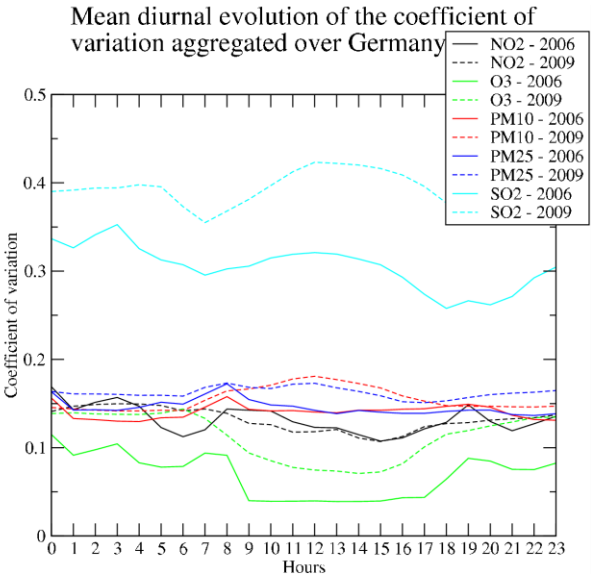

Mean diurnal evolution of the coefficient of variation aggregated over Spain
NO2 - 2006
NO2 - 2009
O3 - 2006
O3 - 2009
PM10 - 2006
PM10 - 2009
PM25 - 2006
PM25 - 2009
SO2 - 2006
SO2 - 2009
Coefficient of variation
Hours


Mean diurnal evolution of the coefficient of variation aggregated over France
NO2 - 2006
NO2 - 2009
O3 - 2006
O3 - 2009
PM10 - 2006
PM10 - 2009
PM25 - 2006
PM25 - 2009
SO2 - 2006
SO2 - 2009
Coefficient of variation
Hours


Mean diurnal evolution of the coefficient of variation aggregated over Italy
NO2 - 2006
NO2 - 2009
O3 - 2006
O3 - 2009
PM10 - 2006
PM10 - 2009
PM25 - 2006
PM25 - 2009
SO2 - 2006
SO2 - 2009
Coefficient of variation
Hours


Mean diurnal evolution of the coefficient of variation aggregated over Holland
NO2 - 2006
NO2 - 2009
O3 - 2006
O3 - 2009
PM10 - 2006
PM10 - 2009
PM25 - 2006
PM25 - 2009
SO2 - 2006
SO2 - 2009
Coefficient of variation
Hours


Mean diurnal evolution of the coefficient of variation aggregated over Poland
NO2 - 2006
NO2 - 2009
O3 - 2006
O3 - 2009
PM10 - 2006
PM10 - 2009
PM25 - 2006
PM25 - 2009
SO2 - 2006
SO2 - 2009
Coefficient of variation
Hours


Mean diurnal evolution of the coefficient of variation aggregated over Germany
NO2 - 2006
NO2 - 2009
O3 - 2006
O3 - 2009
PM10 - 2006
PM10 - 2009
PM25 - 2006
PM25 - 2009
SO2 - 2006
SO2 - 2009
Coefficient of variation
Hours

S8: Description of background sites

Site	*Name*	*Altitude (m)*	*Longitude (°E)*	*Latitude (°N)*	*Pollutants*	*Years*	*Type of date*
AM01	Amberd	2080	44.2606	40.3844	NO2/O3/SO2	2008/2009	DAILY/HOURLY
AT02	Illmitz	117	16.7667	47.7667	NO2/O3/PM10 /PM25/SO2	2006/2007/ 2008/2009	DAILY/HOURLY
AT05	Vorhegg	1020	12.9722	46.6778	NO2/O3/PM10 /SO2	2006/2007/ 2008/2009	DAILY/HOURLY
AT30	Pillersdorf bei Retz	315	15.9422	48.7211	O3	2006/2007/ 2008/2009	DAILY/HOURLY
AT32	Sulzberg	1020	9.9267	47.5292	O3	2006/2007/ 2008/2009	DAILY/HOURLY
AT34	Sonnblick	3106	12.9583	47.0544	O3	2006/2007/ 2008/2009	DAILY/HOURLY
AT37	Zillertaler Alpen	1970	11.87	47.1369	O3	2006/2007/ 2008/2009	DAILY/HOURLY
AT38	Gerlitzen	1895	13.915	46.6936	O3	2006/2007/ 2008/2009	DAILY/HOURLY
AT40	Masenberg	1170	15.8822	47.3481	O3	2006/2007/ 2008/2009	DAILY/HOURLY
AT41	Haunsberg	730	13.0161	47.9731	O3	2006/2007/ 2008/2009	DAILY/HOURLY
AT42	Heidenreichstein	570	15.0467	48.8786	O3	2006/2007/ 2008/2009	DAILY/HOURLY
AT43	Forsthof	581	15.9194	48.1061	O3	2006/2007/ 2008/2009	DAILY/HOURLY
AT44	Graz Platte	651	15.4706	47.1131	O3	2006/2007/ 2008/2009	DAILY/HOURLY
AT45	Dunkelsteinerwa ld	320	15.5467	48.3711	O3	2006/2007/ 2008/2009	DAILY/HOURLY
AT46	Ganserndorf	161	16.7306	48.3347	O3	2006/2007/ 2008/2009	DAILY/HOURLY
AT47	Stixneusiedl	240	16.6767	48.0508	O3	2006/2007/ 2008/2009	DAILY/HOURLY
AT48	Zoebelboden	899	14.4414	47.8386	NO2/O3/PM10 /SO2	2006/2007/ 2008/2009	DAILY/HOURLY
AT49	Grebenzen bei St. Lamprecht	1648	14.33	47.0403	O3	2006/2007/ 2008/2009	DAILY/HOURLY
BE01	Offagne	430	5.2036	49.8778	NO2/O3	2006/2007/ 2008/2009	DAILY/HOURLY
BE32	Eupen	295	6.0028	51.4575	NO2/O3	2006/2007/ 2008/2009	DAILY/HOURLY
BE35	Vezin	160	4.9894	50.5033	NO2/O3	2006/2007/ 2008/2009	DAILY/HOURLY
BG53	Rojen peak	1750	24.7386	41.6958	O3	2006/2007/ 2008/2009	DAILY/HOURLY
CH01	Jungfraujoch	3578	7.985	46.5475	NO2/O3/PM10 /SO2	2006/2007/ 2008/2009	DAILY/HOURLY
CH02	Payerne	489	6.9447	46.8131	NO2/O3/PM10 /PM25/SO2	2006/2007/ 2008/2009	DAILY/HOURLY
CH03	Tanikon	539	8.9047	47.4797	NO2/O3/PM10	2006/2007/ 2008/2009	DAILY/HOURLY
CH04	Chaumont	1137	6.9794	47.0497	NO2/O3/PM10 /PM25/SO2	2006/2007/ 2008/2009	DAILY/HOURLY

CH05	Rigi	1031	8.4639	47.0675	NO2/O3/PM10 /PM25/SO2	2006/2007/ 2008/2009	DAILY/HOURLY
CY02	Ayia Marina	532	33.0581	35.0389	O3/PM10/PM2 5/SO2	2006/2007/ 2008/2009	DAILY/HOURLY
CZ01	Svratouch	737	16.05	49.7333	NO2/O3/PM10 /SO2	2006/2007/ 2008/2009	DAILY/HOURLY
CZ03	Kosetice	534	15.0833	49.5833	NO2/O3/PM10 /PM25/SO2	2006/2007/ 2008/2009	DAILY/HOURLY
DE01	Westerland	12	8.3097	54.9256	NO2/O3/PM10 /SO2	2006/2007/ 2008/2009	DAILY/HOURLY
DE02	Waldhof	74	10.7594	52.8022	NO2/O3/PM10 /PM25/SO2	2006/2007/ 2008/2009	DAILY/HOURLY
DE03	Schauinsland	1205	7.9086	47.9147	NO2/O3/PM10 /PM25/SO2	2006/2007/ 2008/2009	DAILY/HOURLY
DE07	Neuglobsow	62	13.0333	53.1667	NO2/O3/PM10 /PM25/SO2	2006/2007/ 2008/2009	DAILY/HOURLY
DE08	Schmucke	937	10.7667	50.65	NO2/O3/PM10 /SO2	2006/2007/ 2008/2009	DAILY/HOURLY
DE09	Zingst	1	12.7333	54.4333	NO2/O3/PM10 /SO2	2006/2007/ 2008/2009	DAILY/HOURLY
DE43	Hohenpeissenbe rg	985	11.0167	47.8	NO2/O3/PM10	2006/2007/ 2008	DAILY/HOURLY
DE44	Melpitz	86	12.93	51.53	PM10/PM25	2006/2007/ 2008/2009	DAILY
DK03	Tange	13	9.6	56.35	SO2	2006/2007/ 2008/2009	DAILY
DK05	Keldsnor	10	10.7333	54.7333	NO2/O3/PM10 /SO2	2006/2007/ 2008/2009	DAILY/HOURLY
DK08	Anholt	40	11.5167	56.7167	NO2/SO2	2006/2007/ 2008/2009	DAILY/HOURLY
DK09	Storebaelt	250	10.9167	58.3164	NO2/O3	2006/2007/ 2008	DAILY/HOURLY
DK31	Ulborg	10	8.4333	56.2833	O3/SO2	2006/2007/ 2008/2009	DAILY/HOURLY
DK41	Lille Valby	10	12.1261	55.6869	NO2/O3/PM10 /PM25	2006/2007/ 2008/2009	DAILY/HOURLY
EE09	Lahemaa	32	25.9	59.5	NO2/O3/SO2	2006/2007/ 2008/2009	DAILY/HOURLY
EE11	Vilsandi	6	21.8167	58.3833	NO2/O3/SO2	2006/2007/ 2008/2009	DAILY/HOURLY
ES01	San Pablo de los Montes	917	-4.3486	39.5478	NO2/O3/PM10 /PM25/SO2	2009	DAILY/HOURLY
ES06	Mahon	78	4.3167	39.8667	PM10	2009	DAILY
ES07	Viznar	1265	-3.5333	37.2333	NO2/O3/PM10 /PM25/SO2	2006/2007/ 2008/2009	DAILY/HOURLY
ES08	Niembro	134	-4.8503	43.4422	NO2/O3/PM10 /PM25/SO2	2006/2007/ 2008/2009	DAILY/HOURLY
ES09	Campisabalos	1360	-3.1428	41.2811	NO2/O3/PM10 /PM25/SO2	2006/2007/ 2008/2009	DAILY/HOURLY
ES10	Cabo de Creus	23	3.3169	42.3194	NO2/O3/PM10 /PM25/SO2	2006/2007/ 2008/2009	DAILY/HOURLY
ES11	Barcarrola	393	-6.9228	38.4758	NO2/O3/PM10 /PM25/SO2	2006/2007/ 2008/2009	DAILY/HOURLY
ES12	Zarra	885	-1.1019	39.0861	NO2/O3/PM10 /PM25/SO2	2006/2007/ 2008/2009	DAILY/HOURLY

ES13	Penausende	985	-5.8667	41.2833	NO2/O3/PM10 /PM25/SO2	2006/2007/ 2008/2009	DAILY/HOURLY
ES14	Els Torms	470	0.7167	41.4	NO2/O3/PM10 /PM25/SO2	2006/2007/ 2008/2009	DAILY/HOURLY
ES15	Risco Llamo	1241	-4.35	39.5167	NO2/O3/PM10 /PM25/SO2	2006/2007	DAILY/HOURLY
ES16	O Savinao	506	-7.6997	43.2311	NO2/O3/PM10 /PM25/SO2	2006/2007/ 2008/2009	DAILY/HOURLY
ES17	Donana	5	-6.3317	37.0303	NO2/O3/PM10 /SO2	2009	DAILY/HOURLY
ES78	Montseny	700	2.35	41.7667	PM10/PM25	2006/2007/ 2008/2009	DAILY
FI09	Uto	7	21.3772	59.7792	NO2/O3/SO2	2006/2007/ 2008/2009	DAILY/HOURLY
FI17	Virolahti II	4	27.6861	60.5267	NO2/O3/PM10 /PM25/SO2	2006/2007/ 2008/2009	DAILY/HOURLY
FI22	Oulanka	310	29.4017	66.3203	NO2/O3	2006/2007/ 2008/2009	DAILY/HOURLY
FI36	Pallas (Matorova)	340	24.2397	68	SO2	2006/2007/ 2008/2009	DAILY
FI37	ahtari II	180	24.1833	62.5833	NO2/O3	2006/2007/ 2008/2009	DAILY/HOURLY
FI96	Pallas (Sammaltunturi)	340	24.15	68	NO2/O3	2006/2007/ 2008/2009	DAILY/HOURLY
FR08	Donon	775	7.1333	48.5	NO2/O3/SO2	2006/2007/ 2008/2009	DAILY/HOURLY
FR09	Revin	390	4.6333	49.9	NO2/O3/PM10 /PM25/SO2	2006/2007/ 2008/2009	DAILY/HOURLY
FR10	Morvan	620	4.0833	47.2667	O3/SO2	2006/2007/ 2008/2009	DAILY/HOURLY
FR12	Iraty	1300	-1.0833	43.0333	O3/SO2	2006/2007/ 2008	DAILY/HOURLY
FR13	Peyrusse Vieille	200	0.1833	43.6167	NO2/O3/PM10 /PM25/SO2	2006/2007/ 2008/2009	DAILY/HOURLY
FR14	Montandon	836	6.8333	47.3	O3/SO2	2006/2007/ 2008/2009	DAILY/HOURLY
FR15	La Tardiere	133	-0.75	46.65	NO2/O3/PM10 /PM25/SO2	2006/2007/ 2008/2009	DAILY/HOURLY
FR16	Le Casset	1750	6.4667	45	O3/SO2	2006/2007/ 2008/2009	DAILY/HOURLY
FR17	Montfranc	810	2.0667	45.8	O3/SO2	2006/2007/ 2008/2009	DAILY/HOURLY
FR18	La Coulonche	309	-0.45	48.6333	O3/PM10/PM2 5	2008/2009	DAILY/HOURLY
FR19	Pic du Midi	2877	0.1419	42.9367	O3	2007/2008/ 2009	DAILY/HOURLY
FR30	Puy de Dome	1465	2.95	45.7667	O3/SO2	2007/2008/ 2009	DAILY/HOURLY
GB02	Eskdalemuir	243	-3.2042	55.3131	NO2/O3	2006/2007/ 2008/2009	DAILY/HOURLY
GB06	Lough Navar	126	-7.87	54.4431	O3/PM10	2006/2007/ 2008/2009	DAILY/HOURLY
GB13	Yarner Wood	119	-3.7131	50.5964	NO2/O3	2006/2007/ 2008/2009	DAILY/HOURLY
GB14	High Muffles	267	-0.8075	54.3344	NO2/O3	2006/2007/ 2008/2009	DAILY/HOURLY

GB15	Strath Vaich Dam	270	-4.7744	57.7344	O3	2006/2007/ 2008/2009	DAILY/HOURLY
GB31	Aston Hill	370	-3.0331	52.5039	NO2/O3	2006/2007/ 2008/2009	DAILY/HOURLY
GB33	Bush	180	-3.205	55.8586	NO2/O3	2006/2007/ 2008/2009	DAILY/HOURLY
GB35	Great Dun Fell	847	-2.45	54.6833	O3	2006/2007/ 2008/2009	DAILY/HOURLY
GB36	Harwell	137	-1.3167	51.5731	NO2/O3/PM10 /PM25/SO2	2006/2007/ 2008/2009	DAILY/HOURLY
GB37	Ladybower Res.	420	-1.7533	53.3989	NO2/O3/SO2	2006/2007/ 2008/2009	DAILY/HOURLY
GB38	Lullington Heath	120	0.1794	50.7928	NO2/O3/SO2	2006/2007/ 2008/2009	DAILY/HOURLY
GB39	Sibton	46	1.4631	52.2939	O3	2006/2007/ 2008/2009	DAILY/HOURLY
GB43	Narberth	160	-4.7	51.2333	NO2/O3/PM10 /SO2	2006/2007/ 2008/2009	DAILY/HOURLY
GB44	Somerton	55	-3.0481	51.2311	NO2/O3	2006/2007/ 2008	DAILY/HOURLY
GB45	Wicken Fen	5	-0.2928	52.2983	NO2/O3/SO2	2006/2007/ 2008/2009	DAILY/HOURLY
GB48	Auchencorth Moss	260	-3.2447	55.7933	NO2/O3/PM10 /PM25/SO2	2006/2007/ 2008/2009	DAILY/HOURLY
GB49	Weybourne	16	1.1219	52.9506	O3	2006/2007/ 2008/2009	DAILY/HOURLY
GB50	St. Osyth	8	1.0822	51.7781	NO2/O3	2006/2007/ 2008/2009	DAILY/HOURLY
GB51	Market Harborough	145	-0.7722	52.5544	NO2/O3	2006/2007/ 2008/2009	DAILY/HOURLY
GB52	Lerwick	85	-1.1853	60.1392	O3	2006/2007/ 2008/2009	DAILY/HOURLY
GB53	Charlton Mackrell	54	-2.6833	51.0561	NO2/O3	2008/2009	DAILY/HOURLY
GR01	Aliartos	110	23.0833	38.3667	NO2/O3/SO2	2006/2007/ 2008/2009	DAILY/HOURLY
GR02	Finokalia	250	25.6667	35.3167	O3/PM10	2006/2007/ 2008/2009	DAILY/HOURLY
HU02	K-puszta	125	19.5833	46.9667	NO2/O3/PM10 /SO2	2006/2007/ 2008/2009	DAILY/HOURLY
IE01	Valentia Observatory	11	-10.2444	51.9397	NO2/O3/SO2	2006/2007/ 2008/2009	DAILY/HOURLY
IE31	Mace Head	15	-9.5	53.1667	O3/PM25	2006/2007/ 2008/2009	DAILY/HOURLY
IS02	Irafoss	66	-21.0167	64.0833	SO2	2006/2007/ 2008/2009	DAILY
IT01	Montelibretti	48	12.6333	42.1	NO2/O3/PM10 /PM25/SO2	2006/2007/ 2008/2009	DAILY/HOURLY
IT04	Ispra	209	8.6333	45.8	NO2/O3/PM25 /SO2	2006/2007/ 2008/2009	DAILY/HOURLY
LT15	Preila	5	21.0667	55.35	NO2/O3/SO2	2006/2007/ 2008/2009	DAILY/HOURLY
LV10	Rucava	18	21.1731	56.1619	NO2/O3/PM10 /PM25/SO2	2006/2007/ 2008/2009	DAILY/HOURLY
LV16	Zoseni	188	25.9056	57.1353	NO2/O3/PM10 /PM25/SO2	2006/2007/ 2008/2009	DAILY/HOURLY

MD13	Leova II	166	28.2833	46.4883	NO2/PM10/SO2	2008/2009	DAILY
ME08	Zabljak	1450	19.1333	43.15	NO2/SO2	2009	DAILY
MK07	Lazaropole	1332	20.42	41.32	NO2/O3/PM10/SO2	2006/2007/2008/2009	DAILY/HOURLY
MT01	Giordan lighthouse	160	14.2	36.1	O3	2006/2007/2008	DAILY/HOURLY
NL07	Eibergen	20	6.5667	52.0833	NO2/O3/PM10/SO2	2006/2007/2008/2009	DAILY/HOURLY
NL08	Bilthoven	5	5.2	52.1167	SO2	2006/2007/2008/2009	DAILY/HOURLY
NL09	Kollumerwaard	1	6.2772	53.3339	NO2/O3/PM10/PM25/SO2	2006/2007/2008/2009	DAILY/HOURLY
NL10	Vredepeel	28	5.8536	51.5411	NO2/O3/PM10/PM25/SO2	2006/2007/2008/2009	DAILY/HOURLY
NL11	Cabauw	60	4.93	51.97	NO2/O3/PM25/SO2	2006/2007/2008/2009	DAILY/HOURLY
NL91	De Zilk	4	4.5	52.3	NO2/O3/PM10/PM25/SO2	2006/2007/2008/2009	DAILY/HOURLY
NO01	Birkenes	190	8.25	58.3833	NO2/O3/SO2	2006/2007/2008/2009	DAILY/HOURLY
NO15	Tustervatn	439	13.9167	65.8333	NO2/O3/SO2	2006/2007/2008/2009	DAILY/HOURLY
NO39	Karvatn	210	8.8833	62.7833	NO2/O3/SO2	2006/2007/2008/2009	DAILY/HOURLY
NO43	Prestebakke	160	11.5333	59	O3	2006/2007/2008/2009	DAILY/HOURLY
NO52	Sandve	15	5.2	59.2	O3	2006/2007/2008/2009	DAILY/HOURLY
NO55	Karasjok	333	25.2167	69.4667	NO2/O3/SO2	2006/2007/2008/2009	DAILY/HOURLY
NO56	Hurdal	300	11.0781	60.3722	NO2/O3/SO2	2006/2007/2008/2009	DAILY/HOURLY
PL02	Jarczew	180	21.9833	51.8167	NO2/O3/SO2	2006/2007/2008/2009	DAILY/HOURLY
PL03	Sniezka	1603	15.7333	50.7333	NO2/O3/SO2	2006/2007/2008/2009	DAILY/HOURLY
PL04	Leba	2	17.5333	54.75	NO2/O3/SO2	2006/2007/2008/2009	DAILY/HOURLY
PL05	Diabla Gora	157	22.0667	54.15	NO2/O3/PM10/PM25/SO2	2006/2007/2008/2009	DAILY/HOURLY
PT04	Monte Velho	43	-8.8	38.0833	O3	2006/2007/2008/2009	DAILY/HOURLY
RS05	Kamenicki vis	813	21.95	43.4	NO2/SO2	2006/2007/2008/2009	DAILY
RU01	Janiskoski	118	28.85	68.9333	SO2	2006	DAILY
RU18	Danki	150	37.8	54.9	SO2	2006/2007/2008	DAILY
SE05	Bredkalen	404	15.3333	63.85	NO2/O3/SO2	2006/2007/2008/2009	DAILY/HOURLY
SE08	Hoburgen	58	18.15	56.9167	NO2/SO2	2006/2007/2008	DAILY
SE11	Vavihill	175	13.15	56.0167	NO2/O3/PM10/PM25/SO2	2006/2007/2008/2009	DAILY/HOURLY
SE12	Aspvreten	20	17.3833	58.8	NO2/O3/PM10	2006/2007/	DAILY/HOURLY

					/PM25	2008/2009	
SE13	Esrange	475	21.0667	67.8833	O3	2006/2007/ 2008/2009	DAILY/HOURLY
SE14	Rao	5	11.9139	57.3939	NO2/O3/PM10 /PM25/SO2	2006/2007/ 2008/2009	DAILY/HOURLY
SE32	Norra-Kvill	261	15.5667	57.8167	O3	2006/2007/ 2008/2009	DAILY/HOURLY
SE35	Vindeln	225	19.7667	64.25	O3/PM10	2006/2007/ 2008/2009	DAILY/HOURLY
SE39	Grimso	132	15.4719	59.7278	O3	2006/2007/ 2008/2009	DAILY/HOURLY
SI08	Iskrba	520	14.8667	45.5667	NO2/O3/PM10 /PM25/SO2	2006/2007/ 2008/2009	DAILY/HOURLY
SI31	Zarodnje	770	15.0033	46.4286	O3	2006/2007/ 2008/2009	DAILY/HOURLY
SI32	Krvavec	1740	14.5386	46.2994	O3	2006/2007/ 2008/2009	DAILY/HOURLY
SI33	Kovk	600	15.1139	46.1286	O3	2006/2007/ 2008/2009	DAILY/HOURLY
SK02	Chopok	2008	19.5833	48.9333	NO2/O3/SO2	2006/2007/ 2008/2009	DAILY/HOURLY
SK04	Stara Lesna	808	20.2833	49.15	NO2/O3/SO2	2006/2007/ 2008/2009	DAILY/HOURLY
SK05	Liesek	892	19.6833	49.3667	NO2/O3/SO2	2006	DAILY/HOURLY
SK06	Starina	345	22.2667	49.05	NO2/O3/SO2	2006/2007/ 2008/2009	DAILY/HOURLY
SK07	Topolniky	113	17.8606	47.96	NO2/O3/SO2	2006/2007/ 2008/2009	DAILY/HOURLY
TR01	Cubuk II	1169	33	40.5	NO2/SO2	2006	DAILY