

Article title: Modeling and projecting health-relevant combined ozone and temperature events in present and future Central European climate

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Table S1 Overview of all used abbreviations and acronyms. Common institutional, statistical and projection-based abbreviations and acronyms are not listed.

General	Explanation	Predictors	Explanation	Station-based	Explanation	Models and projections	Explanation
AQD	Ambient Air Quality Directive (EU)	GH850, GH500	Geopotential heights at 850 and 500 hPa	r, s, u	EEA's predefined station type of area (rural, suburban, urban)	ESM	Earth System Model
AQG	Air Quality Guidelines (WHO)	LagO3	Ozone persistence (ozone pollution levels of the previous day)	b, i, t	EEA's predefined type of station (background, industrial, traffic)	LR	Logistic regression
MDA8O3	Daily maximum ozone values based on running 8-hour means	MSLP	Mean sea level pressure	rb	Rural background	MLR	Multiple linear regression
MI	Myocardial infarction	MT850, MT500, MT2m	Mean air temperatures at 850 and 500 hPa and 2m	ri	Rural industrial	MDA8O3-MLR	Multiple linear regression to assess MDA8O3
o-t-events	Ozone and temperature events	RH850, RH500	Relative humidity at 850 and 500 hPa	sb	Suburban background	MID	Most important driver
o-t-season	Ozone and temperature season	SSRD	Surface solar radiation downwards	ub	Urban background	SMID	Second most important driver
TX	Daily maximum surface air temperature	STRD	Surface thermal radiation downwards	ut	Urban traffic	TMID	Third most important driver
		TCC	Total cloud cover			TX-MLR	Multiple linear regression to assess TX
		UWind850, UWind 500	Zonal winds at 850 and 500 hPa				
		VWind850, VWind500	Meridional winds at 850 and 500 hPa				

Table S2 Overview of all 85 MDA8O3 stations with station code, station name, location and further statistics and characteristics. Station codes of the assigned temperature stations are also depicted for each ozone station. Daily MDA8O3 concentrations and daily TX levels in the months from April to September are shown with numbers representing the mean for each station over the years.

number	code	name	class	longitude [°]	latitude [°]	altitude [m a.s.l.]	temperature station code	distance [km]	altitude difference [m]	MDA8O3 [µg/m³]	TX [°C]
1	AT30601	Klosterneuburg Wisentgasse	sb	16.30	48.30	200	16	8.31	2	99.08	22.80
2	AT60018	Graz Schlossberg	ub	15.44	47.08	450	12	1.08	84	98.85	22.95
3	AT72106	Innsbruck Reichenau	ut	11.42	47.27	570	13	1.45	7	79.52	22.29
4	AT72113	Innsbruck Sadrach	sb	11.37	47.27	670	13	2.56	93	91.71	22.32
5	AT900ZA	Wien Hohe Warte - Zentralanstalt für Meteorologie und Geodyn	ub	16.36	48.25	207	16	1.88	9	96.30	22.81
6	AT90LAA	Wien Laaer Berg	ub	16.39	48.16	250	16	8.58	52	88.86	22.80
7	AT9STEF	Wien Stephansplatz	ub	16.37	48.21	173	16	3.22	25	89.02	22.81
8	BETB011	41B011 - BERCHEM S.A	sb	4.29	50.86	30	17	8.57	70	79.62	20.14
9	BETR012	41R012 - UCCLE	sb	4.36	50.80	100	17	0.71	0	83.26	20.14
10	BETR740	44R740 - ST.KRUIS-WI	ri	3.81	51.15	5	2571	9.01	4	72.10	20.09
11	CH0002R	Payerne	rb	6.94	46.81	489	2180	0.58	1	100.23	21.09
12	CH0005A	Dübendorf-EMPA	sb	8.61	47.40	432	244	4.16	123	95.30	20.33
13	CH0008A	Basel-Binningen	sb	7.58	47.54	316	239	0.89	0	95.57	21.76
14	CH0010A	Zürich-Kaserne	ub	8.53	47.38	409	244	2.80	146	91.87	20.32
15	CH0011A	Lugano-Università	ub	8.96	46.01	280	242	1.44	7	115.22	22.91
16	CH0013A	Zürich-Stampfenbachstrasse	ut	8.54	47.39	445	244	2.06	110	86.55	20.32
17	CH0017A	Basel-St-Johann	ub	7.58	47.57	260	2192	7.62	3	81.99	22.22
18	CH0021A	Zürich-Schimmelstrasse	ut	8.52	47.37	415	244	3.52	140	71.32	20.09

19	CH0045A	Anières-Débarcadère	rb	6.22	46.28	375	240	7.47	45	96.97	22.28
20	CH0046A	Thônex-Foron	sb	6.21	46.20	422	240	8.53	2	93.90	22.25
21	CH0048A	Genève-Wilson	ut	6.15	46.22	376	241	1.80	29	74.58	22.18
22	CH0049A	Genève-Ste-Clotilde	ub	6.13	46.20	374	241	1.37	31	82.33	22.26
23	CH0050A	Meyrin-Vaudagne	sb	6.07	46.23	439	240	5.00	19	88.12	22.25
24	DEBB021	Potsdam-Zentrum	ub	13.06	52.40	31	54	2.02	50	88.73	21.11
25	DEBE027	B Marienfelde-Schichauweg	ri	13.37	52.40	45	4588	9.75	0	92.55	20.86
26	DEBE032	B Grunewald (3.5 m)	rb	13.23	52.47	50	41	5.29	1	83.44	20.99
27	DEBE034	B Neukölln-Nansenstraße	ub	13.43	52.49	35	4563	5.83	0	80.35	21.05
28	DEBE051	B Buch	sb	13.49	52.64	60	4529	1.56	0	89.53	21.14
29	DEBW019	Ulm	ub	9.98	48.40	481	4708	2.31	86	83.83	19.70
30	DEBW024	Ludwigsburg	sb	9.17	48.90	302	3506	8.06	12	95.32	21.32
31	DEBW027	Reutlingen	ub	9.21	48.49	385	4554	2.54	25	87.15	21.60
32	DEBW039	Villingen-Schwenningen	sb	8.46	48.05	700	4712	0.35	20	96.45	19.36
33	DEBW042	Bernhausen	sb	9.23	48.68	370	2763	1.25	1	85.96	20.79
34	DEBW052	Konstanz	ub	9.17	47.66	403	495	2.22	40	94.68	21.69
35	DEBW076	Baden-Baden	sb	8.22	48.77	148	4284	5.40	92	95.36	21.43
36	DEBW081	Karlsruhe-Nordwest	ub	8.36	49.03	114	2762	6.41	2	96.37	22.99
37	DEBY020	Hof/LfU	sb	11.90	50.32	525	490	1.65	40	81.24	18.41
38	DEBY031	Kempten (Allgäu)/Westendstraße	sb	10.31	47.73	678	496	2.23	27	88.85	19.42
39	DEBY037	München/Stachus	ut	11.56	48.14	521	4431	2.84	0	59.68	20.82
40	DEBY039	München/Lothstraße	ub	11.55	48.15	521	4431	3.63	0	83.43	20.96

41	DEBY052	Neu-Ulm/Gabelsbergerstraße	ub	10.01	48.40	470	4708	4.26	97	82.60	19.70
42	DEBY053	Nürnberg/Bahnhof	ut	11.09	49.45	307	4127	9.76	6	78.23	21.04
43	DEBY062	Regen/Bodenmaiser Straße	sb	13.13	48.97	545	4805	7.09	70	86.76	19.12
44	DEBY063	Regensburg/Rathaus	ut	12.10	49.02	335	4465	5.02	6	62.89	22.00
45	DEBY077	Würzburg/Kopfclinic	sb	9.96	49.80	226	489	3.71	42	84.89	21.55
46	DEBY079	Bad Reichenhall/Nonn	sb	12.86	47.72	465	4547	1.26	5	82.27	21.12
47	DEBY088	Trostberg/Schwimmbadstraße	sb	12.54	48.02	488	4699	1.13	71	87.96	20.59
48	DEBY089	München/Johanneskirchen	sb	11.65	48.17	513	52	7.77	2	89.91	20.94
49	DEHB001	Bremen-Mitte	ub	8.82	53.08	10	42	3.60	6	78.62	19.94
50	DEHB002	Bremen-Ost	ub	8.92	53.06	7	42	8.02	3	75.86	19.97
51	DEHB005	Bremerhaven	ub	8.57	53.56	3	4885	3.16	4	76.44	18.68
52	DEHE008	Frankfurt-Ost	ub	8.75	50.13	100	4107	6.11	9	81.29	22.22
53	DEHE011	Hanau	ut	8.92	50.13	106	4189	1.55	0	80.78	22.10
54	DEHE018	Raunheim	ub	8.45	50.01	90	2761	9.73	22	87.61	22.02
55	DEHE022	Wiesbaden-Süd	ub	8.24	50.05	121	4381	9.46	74	84.87	22.14
56	DEHH021	Hamburg Tatenberg	sb	10.08	53.49	2	11781	9.91	0	74.98	19.83
57	DEMV003	Neubrandenburg	ut	13.27	53.56	15	4698	5.36	54	68.67	19.80
58	DEMV007	Rostock-Stuthof	sb	12.17	54.16	5	472	6.40	1	81.69	18.36
59	DENI011	Braunschweig	sb	10.47	52.23	98	4880	8.33	15	87.01	20.05
60	DENI020	Wolfsburg	sb	10.82	52.44	66	4785	9.78	16	85.08	20.83
61	DENI029	Ostfriesland	sb	7.21	53.36	1	4054	1.55	1	85.37	18.77
62	DENI038	Osnabrück	ub	8.05	52.26	95	4499	0.20	0	82.86	20.02

63	DENI042	Göttingen	sb	9.95	51.55	170	4151	5.50	3	88.48	20.18
64	DENI043	Emsland	sb	7.32	52.50	30	4360	2.38	8	86.43	20.16
65	DENW038	Mülheim-Styrum	ub	6.87	51.45	37	4031	9.25	16	75.55	21.25
66	DENW042	Krefeld-Linn	ub	6.64	51.34	32	4030	7.75	1	79.57	21.12
67	DERP001	Ludwigshafen-Oppau	ub	8.40	49.52	91	4369	6.17	4	82.18	22.67
68	DERP007	Mainz-Mombach	ub	8.22	50.02	120	4381	5.46	75	84.27	22.14
69	DERP013	Westpfalz-Waldmohr	rb	7.29	49.42	455	4595	8.17	55	97.09	19.67
70	DERP015	Westeifel Wascheid	rb	6.38	50.27	680	4618	4.64	31	94.74	16.71
71	DERP021	Neuwied-Hafenstraße	ub	7.48	50.42	65	4447	7.72	62	80.49	22.04
72	DERP022	Bad Kreuznach-Bosenheimer Straße	ub	7.87	49.84	108	4577	1.15	6	77.73	22.40
73	DERP023	Worms-Hagenstraße	ut	8.36	49.63	97	4787	2.58	9	78.23	22.36
74	DERP024	Koblenz-Friedrich-Ebert-Ring	ut	7.60	50.35	68	4447	6.70	59	63.44	22.10
75	DERP025	Wörth-Marktplatz	ub	8.25	49.05	104	51	8.26	8	93.65	23.05
76	DESL002	Bexbach Schule	ub	7.26	49.36	273	4458	3.09	37	87.97	21.11
77	DESL017	Völklingen-City Stadionstr.	ub	6.87	49.25	189	4850	5.08	1	82.71	21.90
78	DESN011	Chemnitz-Mitte	ub	12.92	50.83	300	4954	5.41	118	87.43	19.05
79	DEST011	Wernigerode/Bahnhof	ub	10.79	51.84	230	4758	1.70	4	90.09	19.88
80	DEST028	Zeitz	ub	12.14	51.05	160	4797	0.21	10	87.39	20.61
81	DETH009	Gera Friedericistr.	ub	12.07	50.88	190	3990	3.91	121	84.35	19.91
82	DETH020	Erfurt Krämpferstr.	ub	11.04	50.98	195	487	5.27	121	80.69	19.57
83	NL00107	Posterholt-Vlodropperweg	rb	6.04	51.12	32	4207	9.66	25	83.41	20.66
84	NL00236	Eindhoven-Genovevalaan	ut	5.47	51.47	17	2566	7.03	5	63.78	20.54

85	NL00639	Utrecht-Erzejstraat	ut	5.12	52.07	1	162	5.20	0	60.99	19.85
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