

Supporting information to the manuscript:

Chemical characterization of marine aerosols in a south Mediterranean coastal area located in Bou Ismail, Algeria

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Table S1. Classification of sampling and meteorological conditions (Temperature, wind speed, rainfall and air mass origin).

Date	Season	Air mass origin	Category	T (min)	T (Max)	T (Mean)	Wind Speed (Km/h)	Rainfall (mm)
Sep11-W3	Fall	NW	Marine	15.0	30.0	23.0	30.7	5.0
Sep11-W4	Fall	NW	Marine	14.0	29.0	22.4	25.5	0.0
Sep11-W5	Fall	NE	Marine	17.0	29.0	22.8	37.5	1.0
Oct11-W1	Fall	NE	Marine	13.0	30.0	21.4	25.2	0.0
Oct11-W2	Fall	N	Marine	11.0	31.0	20.1	19.4	8.8
Oct11-W3	Fall	NE	Marine	9.0	28.0	18.9	28.4	0.0
Oct11-W4	Fall	SW	Dust	11.0	31.0	20.1	23.5	15.9
Oct11-W5	Fall	SE	Dust	15.0	23.0	18.8	20.0	13.0
Nov11-W1	Fall	SW	Dust	11.0	17.0	18.1	26.9	29.8
Nov11-W2	Fall	NW	Marine	7.0	27.0	16.1	17.4	0.0
Nov11-W3	Fall	NW	Marine	8.0	24.0	16.3	25.7	24.3
Nov11-W4	Fall	NE ;NW	Marine	9.0	21.0	15.0	26.5	84.9
Nov11-W5	Fall	NE ;SE	Dust	11.0	21.0	15.8	13.0	13.8
Dec11-W1	Winter	SE	Dust	6.0	23.0	14.0	14.8	0.0
Dec11-W2	Winter	NW	Marine	4.0	22.0	13.1	17.2	3.5
Dec11-W3	Winter	NW	Marine	5.0	21.0	11.8	26.1	15.8
Dec11-W4	Winter	NW	Marine	3.0	20.0	10.6	14.0	6.0
Dec11-W5	Winter	N	Marine	6.0	17.0	11.7	21.7	33.0
Jan12-W1	Winter	NW	Marine	4.0	21.0	11.9	22.9	2.0
Jan12-W2	Winter	N	Marine	0.0	19.0	9.6	18.9	0.0
Jan12-W3	Winter	NE	Marine	0.0	17.0	10.9	26.8	3.0

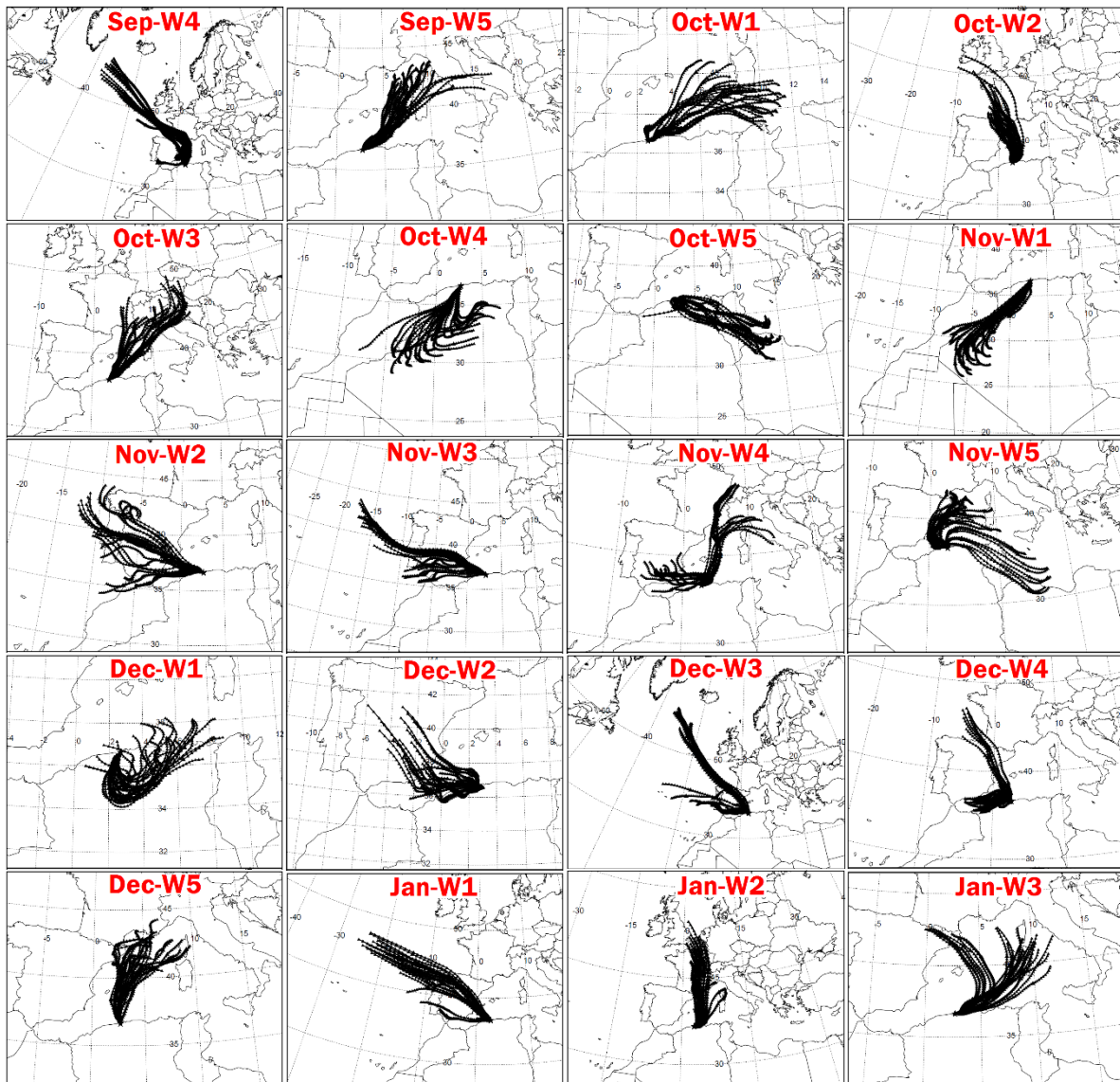


Fig. S1. Forty eight hours back trajectories arriving at Bou Ismail station for the different weeks and in a height of 500m above ground.

Table S2. Concentration of organic aerosol constituents (n-alkanes, PAHs, OPAHs, Me-PAHs, Hopanes and n-alkan-2-ones) measured at the Bou Ismail, 2011-2012.

Sampling Date	n-alkanes ng/m³	PAHs ng/m³	OPAHs ng/m³	Me-PAHs ng/m³	Hopanes ng/m³	n-alkan-2-ones ng/m³
19-sept.-11	18.825	7.201	1.714	0.118	0.354	7.506
20-sept.-11	31.169	7.993	1.784	0.270	0.398	8.131
21-sept.-11	47.700	9.045	1.417	0.184	0.519	2.364
22-sept.-11	29.684	3.440	0.759	0.136	0.349	1.304
25-sept.-11	40.495	6.191	1.462	0.137	0.469	3.742
26-sept.-11	35.998	6.008	1.619	0.193	0.400	4.315
28-sept.-11	53.140	6.192	1.697	0.206	0.588	6.864
29-sept.-11	49.430	6.729	1.699	0.191	0.437	1.529
2-oct.-11	37.236	4.930	1.200	0.118	0.307	4.471
3-oct.-11	37.947	6.713	1.507	0.170	0.496	3.138
4-oct.-11	35.434	7.101	1.662	0.114	0.463	5.822
5-oct.-11	30.396	5.151	1.446	0.168	0.491	3.770
6-oct.-11	33.486	4.678	1.109	0.146	0.427	1.360
10-oct.-11	31.622	6.932	1.381	0.203	0.403	8.047
11-oct.-11	28.774	8.725	1.753	0.178	0.468	7.839
13-oct.-11	22.432	4.842	1.005	0.183	0.375	3.301
16-oct.-11	24.372	5.790	1.441	0.240	0.435	6.671
17-oct.-11	25.574	6.452	1.834	0.194	0.341	4.311
18-oct.-11	47.351	10.036	1.947	0.301	0.581	5.823
19-oct.-11	30.884	5.948	1.813	0.170	0.680	3.445
20-oct.-11	47.459	5.863	1.508	0.175	0.446	1.916
23-oct.-11	36.826	9.046	1.625	0.223	0.486	6.208
24-oct.-11	32.139	7.621	2.086	0.225	0.429	6.661
25-oct.-11	11.834	4.191	0.721	0.115	0.163	5.234
26-oct.-11	14.589	5.878	1.747	0.124	0.312	5.129
27-oct.-11	10.318	5.355	0.741	0.077	0.233	1.166
2-nov.-11	12.806	6.219	1.386	0.137	0.246	4.755
3-nov.-11	7.064	1.639	0.641	0.157	0.151	0.671
8-nov.-11	22.823	9.055	1.253	0.157	0.329	4.808
9-nov.-11	17.597	6.114	1.952	0.176	0.370	4.548
13-nov.-11	50.839	6.355	1.410	0.223	0.593	2.633
15-nov.-11	10.535	5.412	0.925	0.074	0.379	4.961
16-nov.-11	17.397	6.825	0.840	0.104	0.268	3.742
17-nov.-11	22.221	7.031	1.351	0.171	0.300	1.087
18-nov.-11	19.079	6.193	1.299	0.155	0.279	8.706
21-nov.-11	22.608	10.653	0.923	0.234	0.283	6.606
22-nov.-11	7.942	3.515	0.548	0.071	0.138	5.829
23-nov.-11	21.239	12.296	0.881	0.115	0.407	5.420
24-nov.-11	15.849	3.543	1.737	0.101	0.385	0.736
27-nov.-11	32.261	13.804	2.712	0.424	0.777	2.610
28-nov.-11	25.456	11.798	1.046	0.334	0.510	5.813
29-nov.-11	21.785	19.644	0.870	0.136	0.284	3.043

30-nov.-11	14.781	7.514	1.511	0.192	0.364	6.145
1-dec.-11	10.850	3.155	0.670	0.107	0.180	1.673
4-dec.-11	9.388	4.967	0.855	0.081	0.156	1.468
6-dec.-11	18.242	6.738	1.337	0.207	0.146	7.213
7-dec.-11	27.251	9.107	2.617	0.320	0.526	13.242
8-dec.-11	16.332	5.542	1.692	0.109	0.341	1.655
11-dec.-11	28.715	6.906	1.434	0.223	0.393	6.306
12-dec.-11	33.876	10.570	1.382	0.222	0.398	8.497
13-dec.-11	26.635	8.719	1.837	0.201	0.459	6.089
14-dec.-11	21.807	7.179	1.438	0.110	0.432	6.342
15-dec.-11	18.229	7.786	0.910	0.340	0.306	3.096
18-dec.-11	15.499	5.820	1.021	0.274	0.233	6.182
19-dec.-11	11.688	5.847	1.199	0.142	0.220	10.214
20-dec.-11	15.989	4.767	1.481	0.134	0.167	3.971
21-dec.-11	15.181	18.234	1.371	0.131	0.220	3.499
22-dec.-11	22.738	7.479	1.982	0.201	0.416	1.344
25-dec.-11	32.211	7.620	2.087	0.171	0.470	12.759
26-dec.-11	14.132	7.256	1.861	0.167	0.334	9.486
27-dec.-11	18.859	12.902	2.708	0.600	0.491	9.048
28-dec.-11	13.224	3.330	1.793	0.138	0.385	2.993
29-dec.-11	18.481	8.090	1.227	0.160	0.384	0.803
2-jan.-12	58.044	32.683	2.352	0.230	0.802	9.555
3-jan.-12	18.450	11.013	1.863	0.347	0.440	4.706
4-jan.-12	47.510	10.396	1.593	0.247	0.534	4.332
5-jan.-12	23.236	9.988	1.695	0.336	0.503	2.469
8-jan.-12	45.869	13.286	2.678	0.464	0.998	5.862
9-jan.-12	22.415	10.555	2.625	0.488	0.458	6.187
10-jan.-12	58.789	19.299	3.680	0.745	0.690	9.857
11-jan.-12	28.204	12.250	3.425	0.407	0.557	8.033
12-jan.-12	20.789	9.643	1.406	0.291	0.672	2.340
15-jan.-12	22.382	10.824	1.176	0.191	0.397	3.460
16-jan.-12	17.659	8.773	1.540	0.289	0.343	8.511
17-jan.-12	27.240	7.215	1.837	0.287	0.547	10.603
18-jan.-12	22.747	10.071	2.601	0.323	0.419	8.499
19-jan.-12	19.984	7.953	1.803	0.275	0.349	2.056