Supporting Information for:
How COVID-19 related policies reshaped organic aerosol source contributions in central London

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Table S 1 Criteria list to select the solutions from the rolling PMF analysis as recommended by (Chen et al., 2022).

	Criterion	Type	Threshold	Comments
1	HOA vs NO_x	R^2, normal time series	p-value ≤ 0.05	Traffic factor has the best correlation with the NOx than other PMF factors
2	Explained Variation [60] by BBOA	Average, normal time series	to-factor (p-value ⩽ 0.05)	Investigate the explained variation of m/z 60 by BBOA, make sure it explained most of 60 variabilities by this fresh BBOA
3	(HOA+BBOA) vs BC	R^2, normal time series	to-factor (p-value ⩽ 0.05)	To ensure HOA and BBOA explain the fresh black carbon emission at Honor oak park
4	$\frac{(COA[13] + COA[14])/2}{(COA[8] + COA[9] + COA[10])/3}$	Average, hours	>1	Make sure the lunch peak is larger than the morning rush hours to avoid mixing with HOA
5	factor_4[44]	Profiles, fraction, sorting criterion	>0	Sorting criteria to make sure MO-OOA is situated at the 4th position for all PMF runs
6	factor_4[43]	Profiles, fraction	>0	To ensure the intensity of m/z 43 in MO-OOA is larger than 0
7	factor_5[44]	Profiles, fraction	>0	To ensure the intensity of m/z 44 in LO-OOA is larger than 0
8	factor_5[43]	Profiles, fraction	>0	To ensure the intensity of m/z 43 in LO-OOA is larger than 0

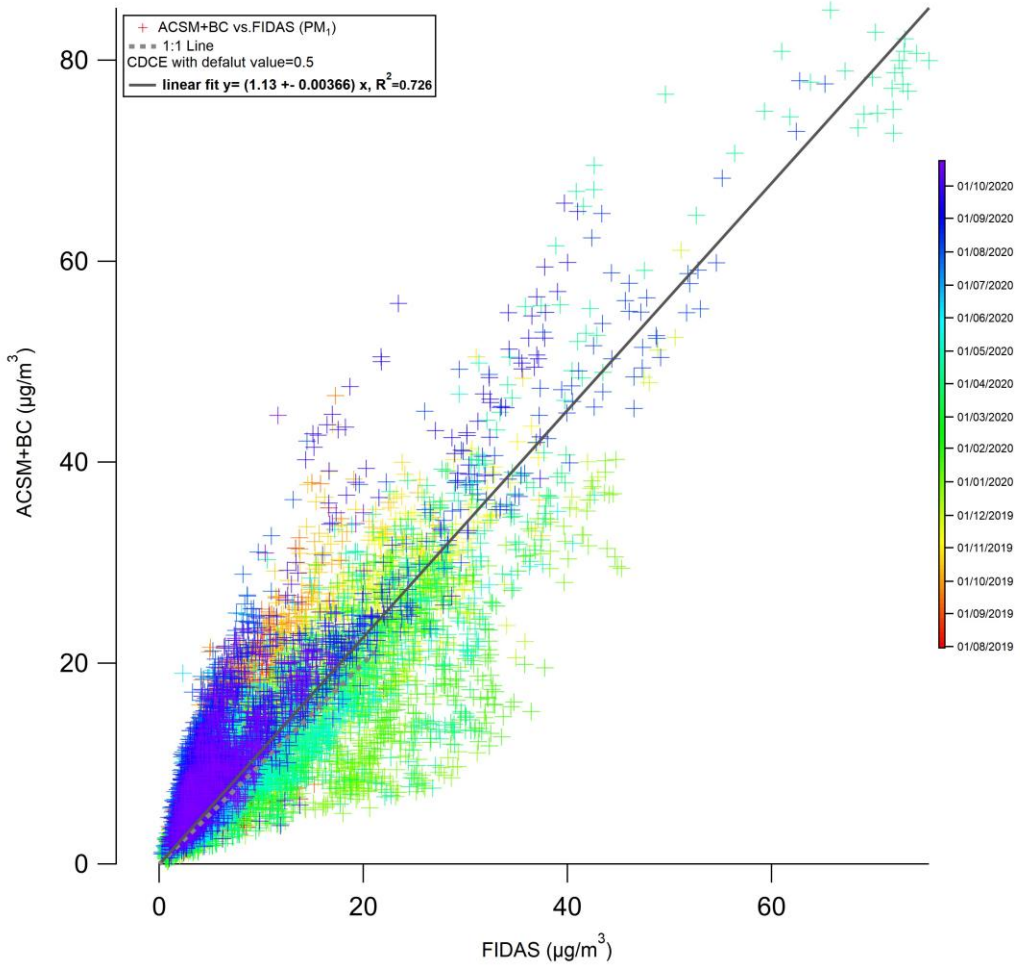

Figure S 1 Mass closure of ACSM plus BC concentration vs. FIDAS PM_1 concentration using the composition dependent collection efficiency (CDCE) correction with a default collection efficiency of 0.5 (Middlebrook et al., 2012).

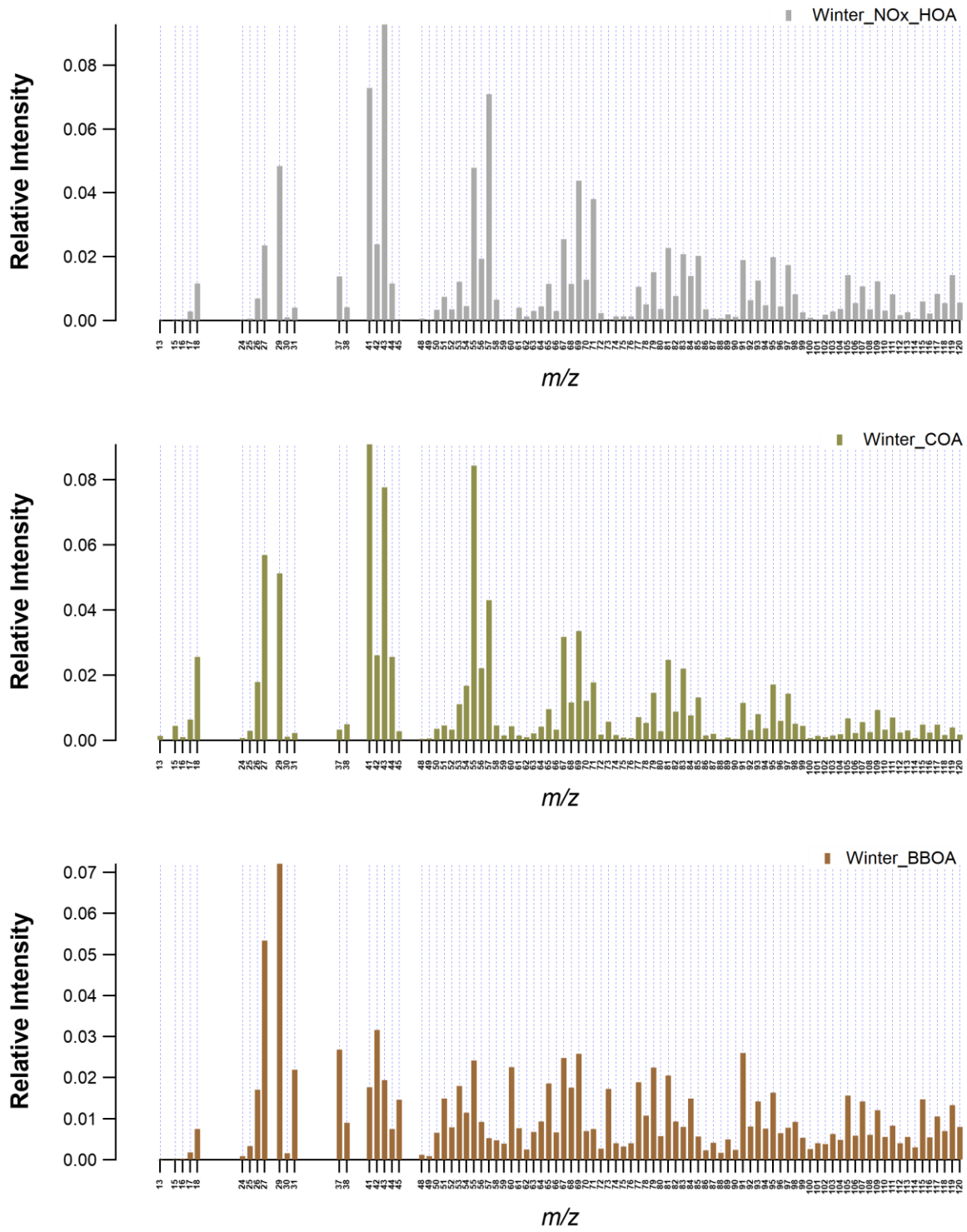

Figure S 2 HOA, COA, and BBOA profiles used to constraint profiles in rolling PMF.

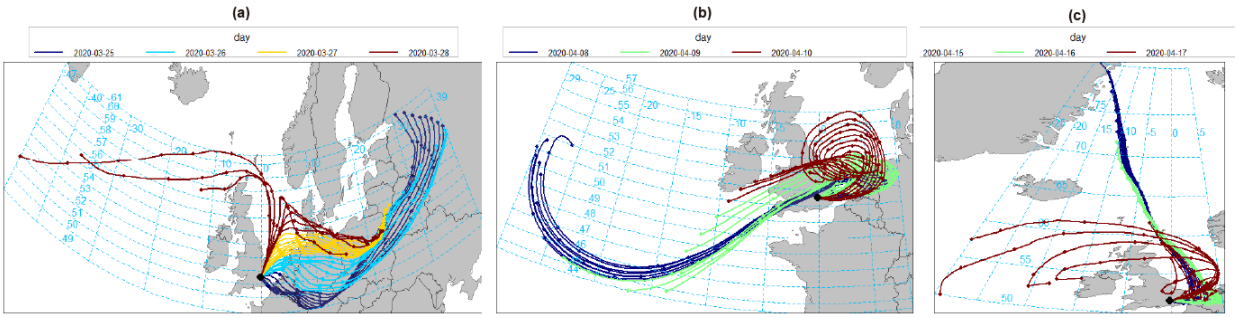

Figure S 3 Back trajectory analysis using HYSPLIT for three spikes in total PM.

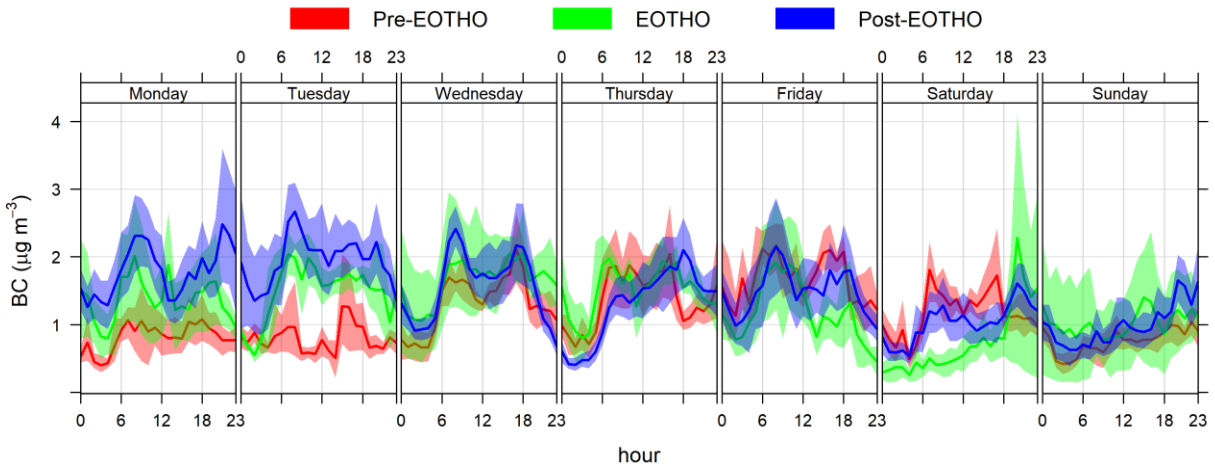

Figure S 4. BC diurnal cycles of each weekday after the lockdown before (red), during (green) and after (blue) the eat out to help out (EOTHO) policy.

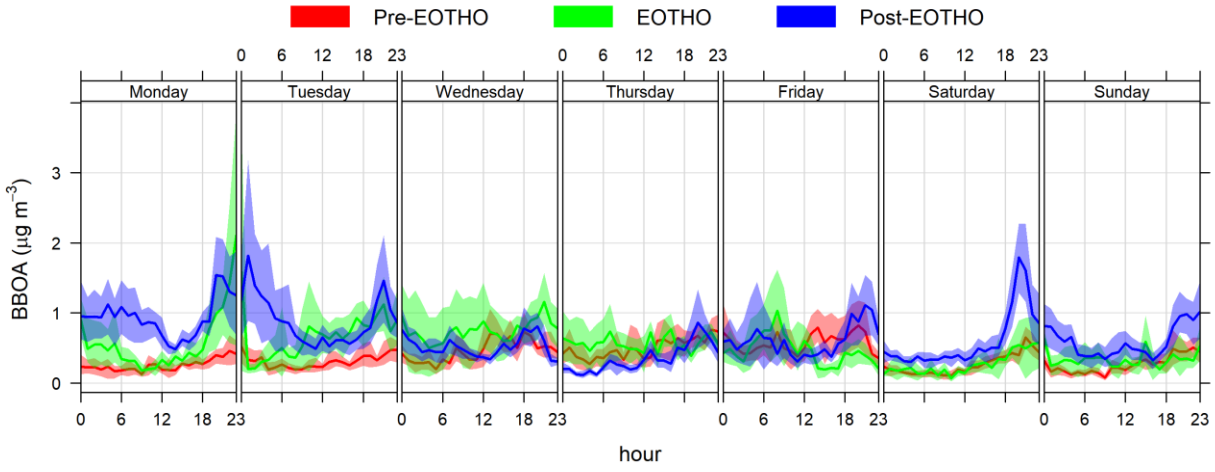

Figure S 5. BBOA diurnal cycles of each weekday after the lockdown before (red), during (green) and after (blue) the eat out to help out (EOTHO) policy.

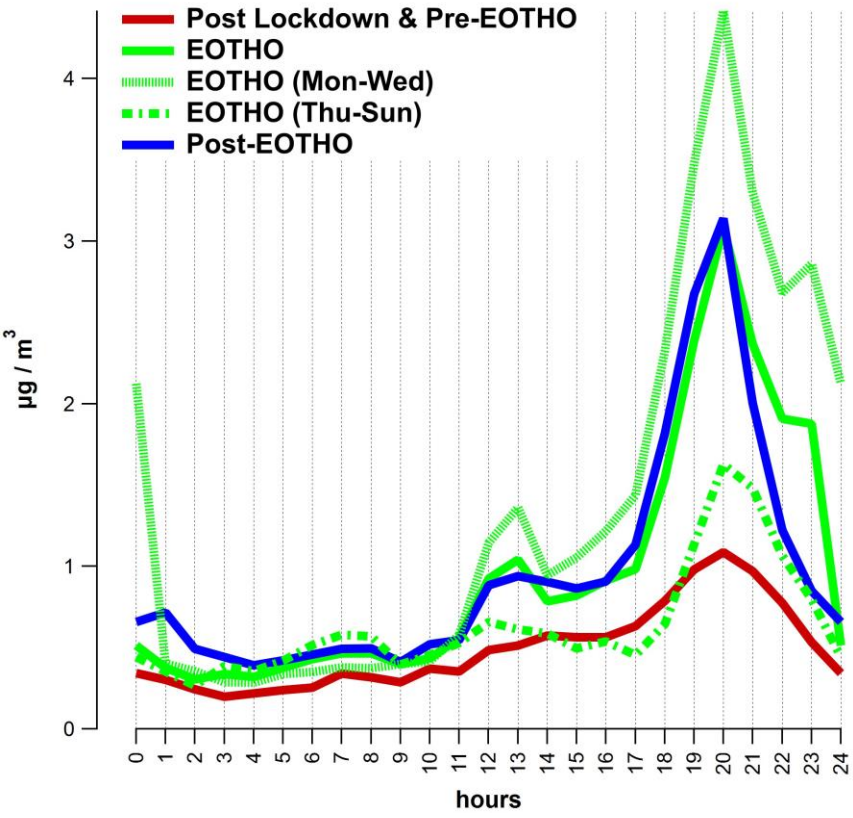

Figure S 6 The diurnal cycle of COA during different periods after lockdown, in which the eat out to help out (EOTHO) policy period was divided into Monday to Wednesday and Thursday to Sunday.

References

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