1	Supplementary for "Atmospheric oxidation capacity and ozone
2	pollution mechanism in a coastal city of Southeast China: Analysis of
3	a typical photochemical episode by Observation-Based Model"
4	
5	Taotao Liu ^{1,2,3} , Youwei Hong ^{1,2} , Lingling Xu ^{1,2} , Mengren Li ^{1,2} , Jinsheng Chen ^{1,2*} , Yahui Bian ^{1,2} ,
6	Chen Yang ^{1,2,3} , Yangbin Dan ^{1,2} , Yingnan Zhang ⁴ , Likun Xue ^{4*} , Min Zhao ⁴ , Zhi Huang ⁵ , Hong
7	Wang ⁶
8	
9	¹ Center for Excellence in Regional Atmospheric Environment, Institute of Urban Environment, Chinese
10	Academy of Sciences, Xiamen, China
11	² Key Lab of Urban Environment and Health, Institute of Urban Environment, Chinese Academy of
12	Sciences, Xiamen, China
13	³ University of Chinese Academy of Sciences, Beijing, China
14	⁴ Environment Research Institute, Shandong University, Jinan, Shandong, China
15	⁵ Xiamen Institute of Environmental Science, Xiamen, China
16	⁶ Fujian Meteorological Science Institute, Fujian Key Laboratory of Severe Weather, Fuzhou, China
17	
18	Corresponding authors E-mail: Jinsheng Chen (jschen@iue.ac.cn); Likun Xue (xuelikun@sdu.edu.cn)
19	

20 Captions:

- Figure S1. The concentrations of monthly and annual MDA8h O₃ in Xiamen from 2016 to 2020.
- Figure S2. 72h back trajectories were calculated at 100 m altitude during 20-29 Sep.
 2019.
- Figure S3. The 10 most prominent contributions to the total OFP during 20-29 Sep.
 2019 in Xiamen.
- Figure S4. Daytime (06:00-18:00 LT) variations of the simulated concentration, production, and loss rate of (a)OH, (b)HO₂, and (c)RO₂ in Xiamen.
- Figure S5. Synoptic situations of surface wind field from 20 to 29 Sep. 2019. Arrows
- 30 in the figure represent the surface wind speed and direction. The blue square is the
- 31 study site.





Figure S1. The concentrations of monthly and annual MDA8h O₃ in Xiamen from 2016 to
2020.



36

Figure S2. 72h back trajectories were calculated at 100 m altitude during 20-29 Sep. 2019.



- 39
- 40 Figure S3. The 10 most prominent contributions to the total OFP during 20-29 Sep. 2019 in
- 41 Xiamen.
- 42



45 Figure S4. Daytime (06:00-18:00 LT) variations of the simulated concentration, production,

- 46 and loss rate of (a)OH, (b)HO₂, and (c)RO₂ in Xiamen.



50 Figure S5. Synoptic situations of surface wind field from 20 to 29 Sep. 2019. Arrows in the

51 figure represent the surface wind speed and direction. The blue square is the study site.

49