

Interactive comment on “2005–2017 ozone trends and potential benefits of local measures as deduced from air quality measurements in the north of the Barcelona Metropolitan Area” by Jordi Massagué et al.

Anonymous Referee #2

Received and published: 21 March 2019

This paper investigates the problem of ozone in one of the most affected areas in Mediterranean region – Barcelona Metropolitan area – looking to a large dataset of pollutants concentrations to understand the dynamics and origin of this photochemical pollution. Nevertheless, this study is only based on data analysis, using common statistical methods/tools (ex. trends), with part of the conclusions just a confirmation of what has been already discussed in previous papers and others conclusions are just hypothesis. In my opinion, this is an interesting and valuable work but not sufficient innovative for this high-impact factor journal. Authors could submit it to other

C1

less-impact journal or include more research studies that could confirm/state the hypothesis launched. Some major comments that could help to improve the paper: Page 3, Lines 111-113: which kind of experimental data are the authors referring here? It is not presented along the text Page 4: To complete the characterization of the study area, ozone precursors emission data should also be mentioned and analysed Page 4, Lines 150-153: Which type of AQ stations are the authors considering? What do the authors mean with “enough spatial and typology representativeness”? This information should be added and discussed. Page 4, Lines 164-166: Authors should justify the choice of the period of data analysed Page 4, Lines 168-171: This is not spatial average analysis... Page 5, Line 211: again the mean estimation at monitoring points to evaluate spatial distribution of the concentrations Page 5, Line 221: Do the authors have explanations to these high concentrations? Page 6, Line 258: I think a plot could be more interesting and legible than the table Page 7, Lines 285-293: Are this weekly patterns analysis? Page 8-9: It's difficult to find the link between the previous work and this conceptual model. It seems that this conceptual model is mainly based on previous published papers. Page 9, Lines 409-410: A reference should be added to support this statement Page 11, 3.5: The authors should clarify which kind of experimental data is used in this section. And if the experimental data was obtained in the scope of this study, this should be highlighted and described in detail.

Interactive comment on Atmos. Chem. Phys. Discuss., <https://doi.org/10.5194/acp-2019-33>, 2019.

C2