

Interactive comment on “Measurement report: Fireworks impacts on air quality in Metro Manila, Philippines during the 2019 New Year revelry” by Genevieve Rose Lorenzo et al.

Anonymous Referee #1

Received and published: 25 November 2020

In this study, most contents are spent on describing the data without enough discussion. There was no new information on the method development and conclusion. The suggestions are as follows: 1. Fireworks have been widely studied all over the world. Although the studies in the Southeast Asian are not so much, the authors must tell us the difference with other regions and the significance of studying fireworks in this region. 2. There are too many questions that the manuscript wants to address. Please combine some of them, so that the aims of this work can be better understood. 3. Why the carbon fractions were not detected in this work? The manuscript said that “Although fireworks emit extensive amounts of inorganic species, the calculated κ values were still relatively low because the background air is dominated by organics and

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black carbon, which are relatively hydrophobic species. . .”. Carbon fractions accounted for high percentages of PM, and they are important product of fireworks as reported in many literatures. In addition, the carbon aerosol is critical for studying the optical properties and hygroscopicity, which are important parts of this work. Thus, it is a big problem if the carbon fractions were not detected. 4. Many results were reported in this work. However, the explanation and the discussion are lacked. And the relationships among data from different methods must be discussed. 5. The size distribution of chemical compositions can be very useful to study the PM properties, but related discussion is unabundant. And the influence of size distribution of chemical compositions on the optical properties and hygroscopicity must be studied. 6. More evidences (such as fire plots) should be provided and combined to get conclusion. 7. The conclusion should be rewritten. The conclusion now just listed some results of the data. The logical relationship of results must be analyzed and more deeper conclusion must be summarized. 8. The results about compositions have been widely reported, and no new information is provided in this work. The size distribution may be an interesting topic, but it was not studied abundantly in the discussion and no conclusion about it is provided.

Interactive comment on Atmos. Chem. Phys. Discuss., <https://doi.org/10.5194/acp-2020-1028>, 2020.

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