

Response to the Editor

The authors have addressed the major comments from the referees to the first version of the manuscript. I ask them to take into account the minor comments to the revised version.

*Thanks. The manuscript has been further revised based on the minor comments of the reviewers. Our responses and revisions are in **italics** and highlighted in **blue**, respectively.*

Response to the Referee #1

The authors have properly addressed the questions and comments raised by the reviewers. I have no further comments except one suggestion: Please revise the title of manuscript as “In-situ measurement of organic aerosol molecular markers in urban Hong Kong during a summer period: temporal variations and source apportionment”.

Accepted with thanks.

Response to the Referee #2

The comments have been well addressed. The paper is ready for publication.

Thanks.

Response to the Referee #3

The reviewer appreciates the authors' efforts in addressing the previous comments and criticisms associated with the submitted manuscript. The revised manuscript has improved and is recommended for publication in ACP, subject to the incorporation of the following minor suggestions aimed at enhancing clarity and consistency.

Thanks. We have made further revisions based on the minor comments. Please see our item-by-item responses below.

1. Lines 20 & 22: It appears that the terms “scenarios” and “cases” are used interchangeably. To prevent any confusion, please choose one term and consistently apply it throughout the manuscript.

The term ‘scenario’ has been replaced with ‘case’ throughout the manuscript.

2. Line 21: Suggest replacing “sources” with “source components” to more accurately reflect that PMF factors may represent not only direct emission sources but also formation processes. This terminology will better indicate that these factors are mathematical constructs that help in understanding the contributions to the data, including combinations of multiple sources or transformation processes, rather than specific, isolated sources.

Thoughtful comment. However, the term ‘source components’ may confuse the readers, because it can also refer to chemical components of sources. We add an annotation to the ‘source’ in the methodology section.

Here, a ‘source’ refers not only to a specific and isolated source of direct emissions, but also to a combination of multiple sources (e.g., vehicle emissions) and/or transformation processes (e.g., SOA).

For details, please see lines 163-164.

3. Line 21: The term “unambiguous” is used in the abstract. If this pertains to the specificity enabled by the TAG method described in the main text, please clarify this connection directly in the abstract to enhance reader understanding.

We delete the term ‘unambiguous’ to avoid overstatement.

4. Lines 323 & 326: To avoid potential confusion (and follow standard language in the PMF community), replace “simulations” with “modelling” when referring to PMF runs. For instance, use “...between the PMF-modelled and observed...” in line 326 and apply this change consistently throughout the manuscript and in Table S8 caption.

Accepted with thanks.

5. Line 391: Change “composition” to “component”.

Accepted with thanks.

6. Lines 396 & 397: The terms “markers” and “tracers” seem to be used interchangeably. Please select one and use it consistently throughout the document. Additionally, provide a justification if these terms have distinct definitions.

For consistency, we replaced ‘tracer(s)’ with ‘marker(s)’ throughout the main text.