

# ***Interactive comment on “MOPSMAP v0.9: A versatile tool for modeling of aerosol optical properties” by Josef Gasteiger and Matthias Wiegner***

## **Anonymous Referee #1**

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The manuscript presents in details a new interesting tool for the modelling of aerosol optical properties. The main innovation is the possibility to use from a web interface, making it potentially appetible for a very wide audience of non-experts in programming. I found the manuscript very clear and well written, with plenty of examples of possible applications that illustrate the potentiality of the code.

I have only a few suggestions to improve the description of the tool:

- page 13: it is described the core of the calculations needed to combine the optical properties of single particles to model particle ensembles, which is key for real-world applications. I found the description from lines 5 to 13 unclear. The authors state

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that each aerosol mode is decomposed into eight contributions, stemming from the combination of the interpolation weights on  $m_r$ ,  $m_i$  and  $\epsilon$ . I suggest to include a simple example, perhaps with only two variables (e.g.  $m_r$  and  $m_i$ ), to allow a better understanding of this algorithm with summation over weights combinations.

- page 13: in the last paragraph, it is mentioned that the combinations are generally  $J$  and not eight, but the reason is unclear. Please clarify with an example.

- page 13: the final calculations of ensemble optical properties are a summation over the aerosol modes included by the user. I suggest to add the information, in this paragraph, that this is equivalent to the so-called "external mixing" assumptions, compared to possible "internal mixing" assumption on the mixing state.

- page 18, line 12: the URL of the tool's web interface is given here for the first time in the manuscript. I suggest to put the information also in the abstract, for more immediacy.

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