

Atmos. Chem. Phys. Discuss., referee comment RC1  
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## Comment on acp-2022-103

Anonymous Referee #1

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Referee comment on "Estimation of elevated black carbon episode over Ukraine using Enviro-HIRLAM" by Mykhailo Savenets et al., Atmos. Chem. Phys. Discuss., <https://doi.org/10.5194/acp-2022-103-RC1>, 2022

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This is a modelling study about black carbon particles but without any validation from measurements, at least some ground measurements of BC are required. The modelling setup is too rough. Not just that, but all the presentation throughout the texts shows the authors have not really performed any meaningful data analysis.

Is the unit of BC concentration in ppbm? What is ppbm by the way.

There are a number of places using quotation marks when referencing. You need to extract the key relevant information and write down in your own way rather than using the original words and quotation marks.

The quality of figures needs large improvement.

What is the size fraction of PM<sub>10</sub>, did you use the mass concentration of PM<sub>10</sub> or PM<sub>10</sub> minus PM<sub>2.5</sub>. The measurement needs to be explicitly given. Also how you have defined the PM<sub>10</sub> is necessarily dust.

For modelling, a description of anthropogenic emission inventory you used is needed.

Fig. 7 is simply part of the open biomass burning emission inventory used (the burn area fraction), not footprint.

Overall, this manuscript is not qualified for commenting in details.