

Atmos. Chem. Phys. Discuss., referee comment RC2
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Comment on acp-2021-156

Anonymous Referee #2

Referee comment on "Geometric estimation of volcanic eruption column height from GOES-R near-limb imagery – Part 2: Case studies" by Ákos Horváth et al., Atmos. Chem. Phys. Discuss., <https://doi.org/10.5194/acp-2021-156-RC2>, 2021

The manuscript builds on the same titled manuscript part 1, where the methodology is described. It seems that the part 1 can be considered as a self standing work and this part 2 presents application of the methodology on several eruptions. From the perspective of volcanology, this manuscript documents several eruptive events and it makes sense to publish it as long the part 1 is published as well. Part 2 compares the results of the proposed methodology with BT based results as with the in situ observations. As the manuscript suggests, the proposed methodology is superior to the BT estimates currently in use also for operational services.

As I have no major comments on the manuscript, I suggest publishing the manuscript after some minor corrections:

Fig1: make larger symbols for volcanoes, it is difficult to see them

Fig3 and the following figs: red diamond is almost invisible on a red line, change colour of the line.

515: "3D Winds" method you apparently describe in the part 1 is not totally novel as suggested, see the link below, the authors used a triplet of two sequential SEVIRI and a MODIS image to consider the influence of wind on the height estimation.

<https://acp.copernicus.org/articles/13/2589/2013/>

The same methodology has been applied also on a combination of images from geostationary orbits:

<https://www.mdpi.com/2072-4292/12/3/371>