Atmospheric Chemistry and Physics Discussions

Atmos. Chem. Phys. Discuss., referee comment RC1
https://doi.org/10.5194/acp-2021-156-RC1, 2021

Comment on acp-2021-156

Anonymous Referee #1

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-RC1, 2021

General comments:

The authors apply the near-limb geometric methodology described in Part 1 to seven different eruptions (5 volcanoes) from 2019 to 2020. GOES side view results are compared with heights from the brightness temperature method (tested with some different temperature profiles), from stereo retrievals using simultaneous Himawari-8 images and from ground-based webcam or photos.

Also in this case the manuscript is clear and very detailed. Each eruption is presented accurately and possible explanations are given for the different results of the various methodologies. If I really have to find a fault, maybe in some cases I would have preferred a little more concise discussion on the results.

Specific comments:

L 46: Himawari-8 dark pixel BT11 with ERA5 profiles is used too. Right?

Table 1: Why didn't you also put the webcam/quadcopter heigths results in table 1 ?

Figure 14c and S3: the red triangle indicating the volcano is not clearly visible, is it possible to enlarge it or/and make it with a different color?