

## ***Interactive comment on “Changes in stratospheric aerosol extinction coefficient after the 2018 Ambae eruption as seen by OMPS-LP and ECHAM5-HAM” by Elizaveta Malinina et al.***

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Dear Authors,

thank you for your paper, which I found very interesting and an enjoyable reading.

I would strongly suggest to compare your aerosol extinction (and AOD) as well as your radiative forcing (RF) estimations with those previously published by Kloss et al., JGR, 2020 (that you cite in your manuscript). For the RF estimations, in particular, Kloss et al. have used a detailed radiative transfer modelling, which is expected to bring more precise estimations than the rough parameterisation of your Eq. 1. Please also specify

C1

that the RF of Eq.1 is the top of the atmosphere RF or otherwise clarify at which altitude it is estimated. Kloss et al. included also several hypotheses on the spectral variability of the extinction, the absorption properties of the particles and the angular distribution of the scattered radiation, and obtained quite different results if compared to yours. This should certainly be discussed in your manuscript. Please add such comparisons to your revised manuscript, that would be a great added value to your interesting work. If the Editor thinks it useful, I could review the revised version of the manuscript, in particular for what concerns this comparison and the RF estimations themselves.

My best regards,

Pasquale Sellitto

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2020.

C2