Atmospheric Measurement Techniques Discussions

Atmos. Meas. Tech. Discuss., author comment AC3
https://doi.org/10.5194/amt-2021-181-AC3, 2021

Reply on EC1

Thomas Flament et al.

Author comment on "Aeolus L2A aerosol optical properties product: standard correct algorithm and Mie correct algorithm" by Thomas Flament et al., Atmos. Meas. Tech. Discuss., https://doi.org/10.5194/amt-2021-181-AC3, 2021

We thank the reviewer for an extensive review, which showed the precise knowledge of the reviewer and her or his interest in the presented work.

The L2A still really is under development. The product was only released to the public in 2021. The aerosol product has long been considered as a side product of the Aeolus mission and it was not as mature as the wind product before launch. The actual behaviour of the instrument in space had to be taken into account after launch, while keeping in line with the requirements of an operational product (although it was not distributed to the public). Also, the focus has been put on tuning the existing algorithms and calibration. Promising new processing methods are being developed and more detailled validation will be made easier when the mission data is homogeneously reprocessed.

As the reviewer pointed out, the objective of this paper is to give information about the currently released data. We followed the recomendation and tried to clarify the use of the "Aeolus internal language". We included some additional figures (Mie and Rayleigh channel signals and attenuated backscatters after cross-talk correction) but we didn't want to overload the paper with to many cases and focused on the Saharan dust case initally presented.

The point-by-point response is provided in the attached document, with original remarks in black and answers in blue.

Please also note the supplement to this comment:
https://amt.copernicus.org/preprints/amt-2021-181/amt-2021-181-AC3-supplement.pdf