

General comments:

in general I am pleased with the response of the authors to my previous review comments and the way they improved the paper in response of this.

I have only a few small minor comments on this new version.

specific comments:

line 146: in the lines above some explanation was added to the changes that happened in the classification algorithm, especially the change in using a threshold on scattering ratio to using a threshold in Mie SNR.

However on line 146 you state that "The method currently applied by ESA is to use the scattering ratio" and this is not correct.

Currently a threshold on Mie SNR is used for classification of the Rayleigh channel. Only before baseline 2B11 the Rayleigh channel applied a threshold on the scattering ratio as derived from the Mie channel.

So please correct this.

line 162: You write "except we do not apply any HLOS error threshold."

But it is not entirely clear to me what you intent to say here. Do you mean you do not apply a threshold check on the estimated error? Or does this refer to a check on the difference between Aeolus wind and reference NWP wind?

line 306: here you write: "Also, near-real-time and reprocessing results are separated"

I think it may not be obvious for the reader what the main differences are between both periods for baseline 11.

The main improvements I think are that the hot-pixel correction has been improved upon by also carefully considering the steps that occurred between the DUDE calibrations. This should mitigate the problems created by hot pixels.

Also the M1 telescope temperature correction procedure was applied in a different way, using data of the day itself rather than data of the day before to tune the correction parameters. This should clearly improve the overall and local biases.

See: <https://earth.esa.int/eogateway/documents/20142/0/Aeolus-Summary-Reprocessing-2-DISC.pdf>

line 525 Figure 6

I really like this new figure, clearly giving the periods when the different baselines were applied. Very nice to see also that the change between the reprocessed and NRT period of baseline 11 is very small.

Just one suggestion would be to also provide the bias results in a similar way.

It would be interesting to see how these changed (or not) with time.