**General comments :**

This is a second review. In general, I'm satisfied with the answers and I think that the article can be published with minor corrections indicated below. However, I'd like to address the questions of the authors they posed in the reply regarding the test I made to show that the retrieval procedure could define the peak position on the ACCD with a sufficient accuracy even if the hot pixel information were not used at all.

The authors write "*The figure does not consider the full Mie fringe shape which is spread over all 16 ACCD pixels – even at the edges of the ACCD the values do not approach zero. For simulation studies, this could be approximated with an Airy function*."
As for the fringe shape spread over all 16 ACCD pixels, the previous simulation used a Gaussian which was also spread over all pixels. The halfwidth of this Gaussian was selected in such a way that the shades of gray in Fig. 1b of (doi:10.5194/amt-2020-458-RC1) resembled those of Fig. 1 of the manuscript. For the second exercise shown below (Fig. 1), I took an Airy function and compared the results with Gaussian. One has to note that in general the sliding profile approach is not sensitive to the shape of the function as long as the function varies at the considered interval and its shape is known with high accuracy.

Then, the authors write that "*On top of that, also the spectrally broad bandwidth Rayleigh signal and the solar background are part of the Mie signal*."
The broad features and constant offsets do not affect the peak position retrieval accuracy if the sliding profile approach is used.

The next comment is important, though: "*Apart from that, it is not clear which values for the atmospheric signal levels and hot pixel amplitudes were used in your simulation. Typical values for the Mie channel are 15 LSB and 5 LSB (both measurement level) for the atmospheric signal level and the hot pixel offset, respectively*"
Indeed, the discretization is important and in the previous exercise this was not taken into account properly, I apologize for overlooking it. If one assumes that the peak value of Mie detector is 15 LSB, then the absolute errors of peak position retrieval in units of ACCD detector row change from ~1.5e-3 to ~1e-1 that corresponds to ~2 m/s (Fig. 1). This is somewhat smaller than the random errors reported for Aeolus wind product, and the comparability of the profiles retrieved for a "healthy" detector with those retrieved from the simulations with hot pixels excluded tells us that the approach of skipping the hot pixels proposed in the first review is still valid. I do not require to include more discussion on this topic than what is already included in the present version of the manuscript (lines 441-444), it's just to draw an attention to this technique that works surprisingly well for different physical phenomena.

**Specific comments**

Lines 98-103: new text states that the read-out noise values were determined during pre-launch tests and then the discussion is based on this value measured on the ground. I understand that normally the noise of the amplifier should not change, but are there any estimates for an onboard read-out noise?

Lines 197: I would specify the actual numbers for the proton fluxes

Lines 199-200: what exactly was different and how this should affect the results?

Lines 301-303: “a more sophisticated” and “a simple 3-sigma” look strange in one sentence.

Lines 441-444: “each pixel indispensable in the wind retrieval”. This is strange. Even though the authors use a different approach than the one used in my exercises, the information content of the whole row is still large, and the absence of a single pixel should not dramatically change the picture. One can carry out a simple “Gedankenexperiment”, which usually is proven in real life with the real data. Imagine that a human eye observes a continuous function, or a continuous shape, or a graphic pattern. Next, let’s imagine that a small patch covering 5% of the image is applied. No doubt that the brain will recover the original shape from this picture, especially if the shape is known. Of course, the bigger the patch, the poorer the accuracy, but for the objects like those shown in Fig. 1 of the manuscript a loss of up to 10% of information should not be critical. If so, the programming algorithm should exist which mimics the brain’s algorithms and recovers the shape. The realization depends on the task, but the general idea should be clear. I believe that it can be realized in the framework of the authors’ method, too. In any case, since the “hot” pixels are not completely erroneous, the authors’ approach works, and this itself is a good achievement.

Lines 497-501: In general, the operational retrieval should not exclude the post-processing, during which the data quality might be improved. At this stage, one can impose different physical constraints and analyze/correct the retrieved data using ancillary information. Even in the current setup we observed an evolution of the products associated with the corrections introduced after validation.

Line 787: It is not clear whether the on-ground tests will reveal the root cause of the hot pixel issue. The problem was not revealed during the pre-flight tests, so it would be good to know what changes are planned in the new experimental setup compared to the previous one.

Technical corrections

Line 157, Table 3, last two lines: I would rewrite it as (a÷b) e- rms or (a±Δ) e- rms

Lines 805, 809, 817, and 819: italicized fonts look strange in some of PDF viewers.

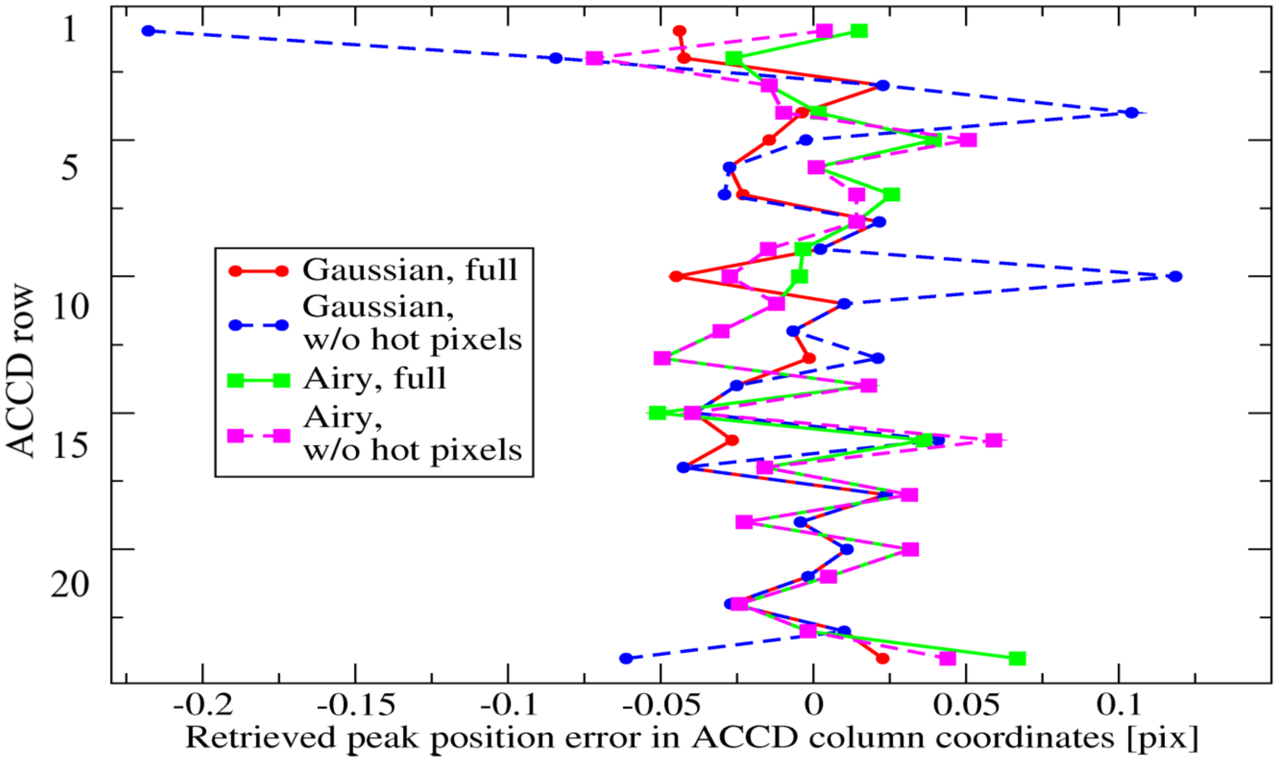


Fig. 1. Errors introduced by using an sliding profile approach to the peak position retrieval from 16×25 ACCD detector signals without hot pixels and with hot pixels excluded from consideration