

Dear Antonio Bruno,

Thank you for responding to the comments from Referee #1 and #2. Your latest revisions on the paper are satisfying. Before the paper can be published, one more minor revision of the conclusions section is required. According to ACP's author guidelines (https://www.atmospheric-chemistry-and-physics.net/policies/guidelines_for_authors.html), the conclusions section should contain statements about the limitations and caveats of the work ("State how these affect confidence in the overall results, and where future work is needed"). Referee #2 had asked for an evaluation of the new satellite product versus ground observation stations in regions other than the one studied here. I understand your argument that this would involve considerable effort outside the paper's scope. Nevertheless, I would like you to address this issue by including a comment in your conclusions stating that the new method has been tested only for one station so far and that future work is needed to demonstrate the general validity of the new satellite product in other regions and latitudes.

Best regards,

Andreas Hofzumahaus

We thank the Editor for this comment. As requested, we have added a statement to the Conclusions section (line 580) clarifying that the ULIRS retrieval method has been tested only for the region investigated in this study. We also state that further evaluations in other regions and at different latitudes will be carried out in future work to demonstrate the broader applicability and robustness of the satellite product.