

Dear Editor,

We fully revised our manuscript entitled ‘ALICENET - An Italian network of Automated Lidar-Ceilometers for 4D aerosol monitoring: infrastructure, data processing, and applications’ (EGUSPHERE-2024-730) following the two Reviewers suggestions.

Both of them raised the point of difficult reading of the ALICENET processing algorithms descriptions in relation to the chosen separation between main text and supplement . However, while one Referee seems to suggest to provide more details in the main text (‘To some extent I really missed information of the supplement to practically understand e.g. some products during the reading of the manuscript’), the other suggested the opposite (‘The description of the technical details of the data quality control and the algorithm development may be moved to the supplement to improve the readability of the manuscript, as already suggested by another review’).

We acknowledge that the subdivision between the main text and the supplement was not optimal in the submitted version of the manuscript. In fact, the algorithms description sections had a confusing hybrid approach, giving some details in the main text and some others in the supplement.

Taking into account these useful comments of both Reviewers, in this revised version we thus opted to extensively restructure the manuscript. It now has a lighter main text in which the algorithms are only briefly introduced, and all the technical aspects of the ALICENET algorithms were moved into detailed, specific supplement sections. We believe that this makes the reading of the main text easier for the wider readership interested in getting information about ALICENET, its products and related applications. At the same time, very expert readers (as the Reviewers) could find all the specific technical details in one place (the supplement), this potentially allowing them to reproduce the algorithms.

A detailed list of modifications is given in the point-by-point reply to Referees.

Due to the important revisions of both the structure and language of the main manuscript and the supplement, at this stage we are only submitting the ‘clean’ version of revised manuscript, as the additional ‘track-changes’ version will likely generate confusion.

Finally, we would like to point out that, as stated since the submission phase, it is our intention to make the presented datasets freely accessible and linked to a doi, should the revision process lead to a positive outcome. At the moment, these are still accessible to the Editorial Office and to the Reviewers at the link provided at the submission.

Thank you for your support in the revision process

Annachiara Bellini and Francesca Barnaba on behalf of all co-authors