

Dear authors

Thank you for applying the typographical suggestions in this latest round of revisions. Unfortunately, I don't see my main comment from the last round addressed. I therefore ask you again to reply to this comment from the last round.

Comment: The main motivation of the manuscript is to "assess the applicability of physics-based and ML-based algorithms in retrieving the diurnal cycle of cloud base height", and this is discussed in Sec. 4.2.2. However, in the conclusions & discussion section, the performance of the algorithms in retrieving the diurnal cycle of CBH is completely left out of the discussion - only the general performance is discussed. I thus ask the authors to rewrite this section to emphasise the diurnal cycle aspect of this technical note.

For the reference to ERA5, please also refer to the original publication of Hersbach et al. 2020 (<https://doi.org/10.1002/qj.3803>) to acknowledge the work.

Once these comments are properly addressed, I think the manuscript could be published.

Best wishes, Raphaela Vogel

Answer: Thanks for your suggestion. Yes, agree, we have added a paragraph at the discussion section to illustrate this issue *“In general, the physics-based algorithms, such as GEO CLAVR-x and GEO IDPS, demonstrate notable advantages in capturing the diurnal cycle of CBH. Unlike ML-based methods, they offer more stable error metrics, especially with higher correlation and lower RMSE during the daytime. Additionally, they are more effective at capturing significant and natural variations in CBH, providing generally higher quality retrievals from H8/AHI data, even though challenges remain in accurately retrieving CBHs below 1 km.”* at line 638.

Besides, we have added Hersbach et al. 2020 (<https://doi.org/10.1002/qj.3803>) paper for the reference to ERA5 at line 157. But we did not use ERA5 data in this work. ERA5 is only used in the previous work (Lin et al., 2022), and the main description is around line 157

Lin, H., Li, Z., Li, J., Zhang, F., Min, M., and Menzel, W. P.: Estimate of daytime single-layer cloud base height from Advanced Baseline Imager measurements, Remote Sensing of Environment, 274, 112970, [10.1016/j.rse.2022.112970](https://doi.org/10.1016/j.rse.2022.112970), 2022.