

Authors' Response

We would like to thank all those involved for their time and effort in reviewing, commenting on, and contributing to this manuscript. The Editor and reviewers have provided valuable feedback that has significantly improved the scientific quality of the paper. Below, we would like to state the following points (points 1,2) and report some relevant changes made in the manuscript (points 3,4).

1. The full names for all authors are used.
2. I ensure that the reproduction rights for all figures have already been secured and that maps and aerals include the required copyright statements or credits as requested by the providers.
3. Regarding Area 1, the figure 5 left is improved, with equally spaced conceptual day and night trajectories of CALIPSO.
4. The datasets that are used for the results of this work can be found in the data availability section: *“The ASKOS Campaign dataset is available from the ESA Atmospheric Validation Data Centre (EVDC) at <https://evdc.esa.int> with DOI: 10.60621/jatac.campaign.2021.2022.caboverde \citep{marinou-2023-askos}. Visualized datasets of the ASKOS Campaign and additional information are also available at <https://askos.space.noa.gr/data>; The ERA5 reanalysis dataset used in this study are available from the Copernicus Climate Change Service (C3S) Climate Data Store: \citeauthor{era5}: ERA5 hourly data on single levels from 1940 to present, (C3S - CDS), <https://doi.org/10.24381/cds.adbb2d47>. The livas dataset is available upon request.”*