

Line 123: Please clarify how liquid cloud pixels were identified. Was the MODIS cloud phase product used, or was a threshold based on cloud-top temperature (CTT) applied?

“To limit the analysis to low clouds, we only aggregate liquid-phase MODIS pixels (identified by MODIS cloud particle phase product) with cloud tops below 3 km, with pixel-level cloud top height taken from MODIS.”

Line 125: Please specify whether cloud-top temperature and pressure were used in computing the adiabatic condensation rate of water vapor with height.

The parameter Γ in (1) is the adiabatic condensation rate of water vapor with height, which is a function of temperature and pressure (Albrecht et al., 1990). We calculate Γ for each 1-km pixel using MODIS cloud top temperature and pressure.

Line 135: Please correct the subscript formatting in Z_{max} .

Corrected.

References: Please make sure that all added references also show up here. For instance, Alexandri et al. (2024) seems to be missing.

Added the following reference and several other missing references:

Alexandri, F., Müller, F., Choudhury, G., Achtert, P., Seelig, T., and Tesche, M.: A cloud-by-cloud approach for studying aerosol–cloud interaction in satellite observations, Atmos. Meas. Tech., 17, 1739–1757, [doi:10.5194/amt-17-1739-2024](https://doi.org/10.5194/amt-17-1739-2024), 2024.