This work tends to provide a regionally adaptable framework for converting observations of space-borne lidars into cloud-relevant aerosol properties, such as CCN and INP. The use of conversion factors, to calculate the bulk particle properties form a single extinction coefficient, when the aerosol type is known, is a promising direction. Authors consider dust-related conversion factors at numerous AERONET sites, which cover major dust transport pathways. They demonstrate that dust-related conversion factors decrease with distance from source regions. The study also compares CCNC from POLIPHON and OMCAM revealing discrepancies between these approaches. This study presents an important contribution to global characterization of CCNs and INPs from space. The manuscript is well written and is suitable for publishing in AMT. I have just some technical comments.

Ln 58. "or a 1020-nm particle linear depolarization ratio >53%". Why it is so high?

Table 1. LR is not introduced.

Ln 123 "We calculate the column-integrated dust ratio…" Would be good to explain meaning of dust ratio.

Eq.3. Subscript 1020 is written not everywhere. Should be harmonized.

Ln 125 "PLDR values are set to 0.30 and 0.02, respectively" In the beginning authors mentioned depolarization above 50%, for this calculation they use 30%. Should be explained.

Ln 131. What is J_d?

Table 2. Is it possible to estimate uncertainties of presented parameters?