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Comment on amt-2020-502

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Community comment on "Directionally dependent Lambertian-equivalent reflectivity (DLER) of the Earth's surface measured by the GOME-2 satellite instruments" by Lieuwe G. Tilstra et al., Atmos. Meas. Tech. Discuss.,
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The second part of the sentence "Examples of this are the introduction of geometry-dependent surface Lambertian-equivalent reflectivity (GLER) (Vasilkov et al., 2017; Qin et al., 2019) and similar work described in a recent paper by Loyola et al. (2020)" on page 2 is not quite correct.

Some features of the GE_LER (geometry-dependent effective Lambertian equivalent reflectivity) retrieval developed at DLR are similar to the GLER from NASA, others are similar to DLER from KNMI, and finally there are features unique to GE_LER:

- The main inputs to GE_LER and DLER are L1 data from UVN sensors (GOME-2, TROPOMI, etc.) in contrast to GLER that uses MODIS L2 data.
- GE_LER and GLER provide daily maps (i.e. not just climatology) of surface properties, this is particularly important for rapid changes conditions like fresh snow/ice.
- GE_LER (and probably DLER) provides information for all surface types (land, ocean, snow/ice) as well as UV/VIS/NIR regions. MODIS BRDF used in GLER doesn't cover the UV spectral region and is limited to land.
- GE_LER uses the same fitting window as the corresponding cloud/aerosol/trace_gas retrievals. That is not the case for GLER and DLER that are based on single wavelengths.
- GE_LER uses the same radiative transfer model (RTM) assumptions/inputs as the corresponding cloud/aerosol/trace_gas retrievals. For example the GE_LER retrieval at 325-335 nm takes as input total ozone measurements from TROPOMI and not climatological values.

In summary, I suggest to reformulate the sentence "and similar work described in a recent paper by Loyola et al. (2020)" and include a more complete comparison of the features from GE_LER, GLER and DLER.