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Comment on acp-2021-387

Vladimir S. Kostsov et al.

Author comment on "Inter-annual, seasonal and diurnal features of the cloud liquid water path over the land surface and various water bodies in Northern Europe as obtained from the satellite observations by the SEVIRI instrument in 2011-2017" by Vladimir S. Kostsov et al., Atmos. Chem. Phys. Discuss., <https://doi.org/10.5194/acp-2021-387-AC2>, 2022

Short comment from the authors.

As a contribution to the open discussion of the present manuscript, we would like to attract attention to the new preprint published recently in AMTD:

Kostsov, V., Ionov, D., and Kniffka, A.: Retrieval of the land-sea contrast of cloud liquid water path by applying a physical inversion algorithm to combined zenith and off-zenith ground-based microwave measurements, Atmos. Meas. Tech. Discuss. [preprint], <https://doi.org/10.5194/amt-2021-415>, in review, 2022.

This preprint has direct relevance to the existing submission since it describes the ground-based measurements of the LWP land-sea contrast in the Neva Bay of the Gulf of Finland – one of the regions considered in the ACPD manuscript under discussion.

In this AMTD preprint, the LWP land-sea contrast detected by the SEVERI instrument in the Neva Bay is compared to the results of the ground-based microwave observations and a good agreement for June and July has been found.

As far as the so-called "August anomaly" detected by SEVIRI is concerned, there is still no confirmation of this effect by the ground-based microwave measurements. The term "August anomaly" is used in our present manuscript to identify the absence of the LWP gradient in August in contrast to June and July. It should be emphasised that this "August anomaly" is strictly limited to the Gulf of Finland and it is one of the main findings of the study under discussion.

Vladimir Kostsov, on behalf of all authors