Minor comments

1. **Comment:**
   Overall, I think, the presentation of the data set could benefit from validation and comparison to other measurements, e.g., collected during previous campaigns. This could help the user, for example, to assess the liquid water path retrieved by the cloud radar, as the standard Cloudnet instrumentation for this quantity is a microwave radiometer.

   Response:
   Remote sensing data collected during the previous PaCE campaigns were quite limited, and as already mentioned in the manuscript, validation against in situ measurements is part of future work. The LWP obtained from the cloud radar 89 GHz passive channel can be assessed at other sites with a similar cloud radar and a dedicated microwave radiometer. Updated the manuscript on line 89: Standard Cloudnet instrumentation requires a dedicated multichannel microwave radiometer (MWR) on site, but in certain atmospheric conditions a single-channel MWR is able to provide LWP with sufficient accuracy. Figure 5 shows a comparison of the LWP from a similar RPG-FMCW-94 cloud radar (Moisseev, 2024a) and a multichannel RPG-HATPRO-G5 microwave radiometer (Moisseev, 2024b) in Hyytiälä, Finland, around 680 km south of Kenttärova, at the same time as the PaCE 2022 campaign. Measured LWP values over 0.1 kg m^{-2} show a good correlation with a mean difference of 7 g m^{-2}, but the single channel overestimates smaller values with a mean difference of 21 g m^{-2}.

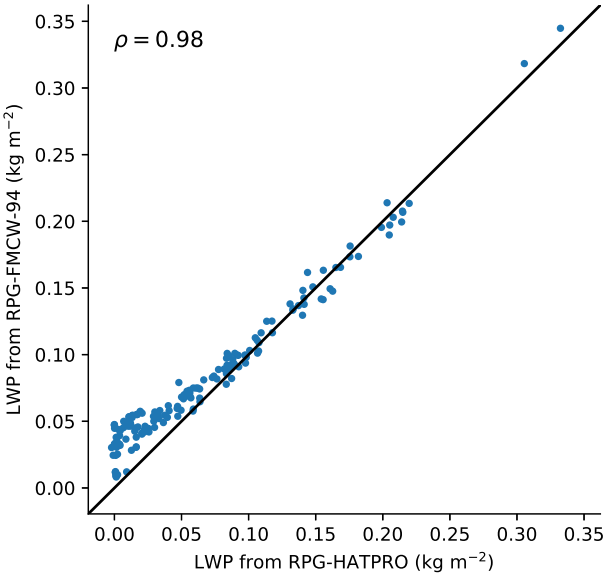

Figure 5: Comparison of liquid water path (LWP) hourly average from a single-channel microwave radiometer of a RPG-FMCW-94 cloud radar and a multichannel RPG-HATPRO-G5 microwave radiometer in Hyytiälä at the same time as the PaCE 2022 campaign. Data was only available for the end the campaign from 2 to 15 December.

2. **Comment:**
   Also, an illustration of the VOODOO results would be helpful. The issue of missing liquid layers due to lidar attenuation is well known and VOODOO provides a valuable approach for the situations. Due to its still experimental stage, it would be good, to show and discuss the results of this method, for users inexperienced with VOODOO.

   Response:
   We agree that VOODOO should be discussed in more detail. We added a figure to illustrate the method and extended its description on line 156: This probability can then be used in the categorization of liquid pixels. Figure 6 shows a comparison of the Cloudnet classification using the standard method and the VOODOO method. The standard method detects less supercooled liquid than VOODOO and fails to identify any liquid above 3 km due to lidar attenuation. Under optically thick cloud conditions like this, VOODOO improves the standard classification, but more validation work is needed before it can be used operationally.

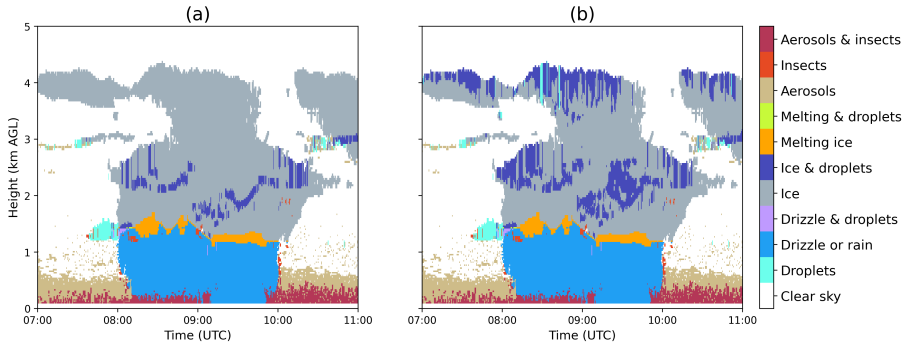

Figure 6: Example of the Cloudnet target classification on 24 September 2022 using **(a)** standard Cloudnet method and **(b)** VOODOO method.

Specific comments

1. **Comment:**
   Line 67: Change the sentence "...up to a height of 15 km height" to "...up to a height of 15 km" to avoid repetition.

   Response:
   Corrected.

2. **Comment:**
   Line 73: "attenuated backscatter cofficient" should be corrected to "attenuated backscatter coefficient.".

Response:
Corrected.

3. **Comment:**
   Line 163: Add a comma before “and higher-level derived synergetic geophysical products.”.

   Response:
   Corrected.

4. **Comment:**
   Line 182: Change “according the FAIR principles” to “according to the FAIR principles.”.

   Response:
   Corrected.