

## ***Interactive comment on “Comparing the cloud vertical structure derived from several methods based on measured atmospheric profiles and active surface measurements” by M. Costa-Surós et al.***

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Received and published: 4 June 2014

We really appreciate the comments of referee #1 to our paper, and his/her recommendation for publication in AMT. The answers to the specific comments follow:

- We found appropriate to change the title in the sense of referee #1 suggestion: The new title will better express what we have done, and the paper will be easier to find due to the keywords added in the title. So, the title of the final version will be:

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“Comparing the cloud vertical structure derived from several methods based on radiosonde profiles and ground-based remote sensing measurements”

- The reviewer is right. There are other sites (Lindenberg, Juelich and Leipzig, Germany; Mace Head, Ireland; Potenza, Italy; and Sodankyla, Finland) belonging to Cloudnet. So the sentence, changed accordingly, will be (P. 3685 Line 9/10):

“The Cloudnet sites (Illingworth et al., 2007) provide a sophisticated product of vertical cloud distribution. There are nine Cloudnet observing stations across Europe equipped with a suite of active and passive remote sensing instruments (a Doppler cloud radar, a near-IR lidar ceilometer, and a dual-wavelength microwave radiometer) accompanied by standard meteorological instruments (more information in <http://www.cloudnet.org/>).”

- Finally, the sentence in P. 3689 Line 17 will also be changed for a better understanding:

“The properties of the three instruments are specified in Table 1. Despite providing only a vertical “pencil” beam, cloud radar–lidar systems can provide more accurate cloud vertical distributions and compensate for most of the shortcomings in cloud vertical distributions from surface observers and even from satellite imagery (Xi et al., 2010).”

Montse Costa-Surós (on behalf of all authors)

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Interactive comment on Atmos. Meas. Tech. Discuss., 7, 3681, 2014.

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