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Interactive comment on "Cloud base height retrieval from multi-angle satellite data" *by* Christoph Böhm et al.

Anonymous Referee #3

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The paper presents an interesting technique to infer cloud base height from the MISR standard cloud product. It demonstrated a valuable skill with this technique that uses the 15 percentile threshold to the vertical distribution of MISR cloud heights in a 10-km domain. The algorithm can be readily applied to all MISR cloud data for seasonal and global statistics of cloud base height.

The technique is perhaps valid for broken cloud scenes in the 10km domain, but would fail if clouds are 100$ optically thick or overcast in the domain. This is often the case over land, but not necessary over ocean. The authors should acknowledge this limitation in the abstract and conclusion.

For the sensitivity calculations summarized in Table 3, the results might be dependent on roughness of terrain since MISR cloud height retrievals would correlate worse with

ceilometer base height if the site is surrounded by mountains. What would be the results if only those sites with flat terrain (in 10, 20, or 30 km radius) are included in statistics?

Some minor issues and English: p4, line 12: MISR cloud motion vector in L2TCSP file is determined at 17.6 km resolution, and is used to derive H_SDCM by correcting the wind-induced parallax effect. As noted in Mueller et al. (2013, 2016), the cloud height and along-track wind errors are correlated.

p17, line 21 .. shows a higher number of ...

p.17, line 27 .. seasons ..

p20, line 20 ... mentioned ...

Interactive comment on Atmos. Meas. Tech. Discuss., doi:10.5194/amt-2018-317, 2018.