

## Author's response

20 June 2023

**Editor decision: Publish subject to minor revisions (review by editor) by Benjamin Smith**

**Public justification (visible to the public if the article is accepted and published):**

The revised manuscript looks good. I have just a few revisions that need to go in for the last two sections. Once these are cleaned up, we should be able to wrap the manuscript up right away.

Best

Ben

We would like to thank you very much again. We really appreciate your thorough check of our revised manuscript. Please see our responses below.

Revisions:

481: the refraction -> such refraction

483-84: "may have been" -> "may need to be"

The sentences have been revised (Lines 481 and 483-484).

490: ", in the case of a cylindrical CH on a rather flat surface with a diameter of 0.10 m," -- is this intended to be a limiting case? If so, then the better statement would be "even for relatively large CH on flat surfaces with diameters up to around 0.1 m". If I have misunderstood this, please add some words to clarify the intent of this phrase.

Yes, the sentence means a limiting case. The sentence has been revised as suggested (Line 490).

493: specify "The CH diameter range considered in this study"

The range is based on that assumed for  $\phi$ -exp. The information has been added (Lines 492-493).

504 "relatively accessible"-- should this be "more accessible"? Relatively does not indicate more or less. Or is the point that both diffuse and direct radiation can influence CH development?

"more accessible" is correct for the sentence. The word has been modified (Line 504).

505- should be "both components"

I missed that. The word has been modified (Line 505).