

***Interactive comment on “Soil water regulates the control of photosynthesis on diel hysteresis between soil respiration and temperature” by Ben Wang et al.***

**Anonymous Referee #2**

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In this manuscript, by introducing a threshold value of soil water content (SWC), the dominating factor of diel variation of soil respiration is identified as photosynthesis or temperature, corresponding to autotrophic or heterotrophic respiration. Generally, the MS is well written and the topic is interesting, however, it would be better to substitute the ratio of SWC to soil porosity for SWC. As the author mentioned in “4.1 Physical-vs. biological-processes in the control of diel hysteresis”, within-soil gas transport is influenced not only by SWC, but also by soil porosity. So with the ratio of SWC to soil porosity, the results and conclusion of this MS will be more comparable and universal, but not so local.

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