

Interactive comment on “Freeze-thaw processes of active layer regulate soil respiration of alpine meadow in the permafrost region of the Qinghai-Tibet Plateau” by Junfeng Wang et al.

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We updated the response to one of the comments from the first reviewer "Section 3.3: Table 2 was missing from the manuscript. However, a summary table of the Q10, mean (min/max) Rs rates, SR, and contribution to the annual balance would be helpful. Then the numbers do not necessarily have to be mentioned in the text, which could help with readability. Figure 3 could then possibly be presented in Table 2 as well? For Q10, it would also be important to indicate the range of soil temperatures during the different stages, since the effect of low temperature on temperature sensitivity and Q10 is later discussed in the text." as follows: The reviewer made a valid point, and we

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have supplemented Table 2 in the manuscript. As the results are clearly presented in Table 2, we revised the part and deleted the values in the text. We calculated the contribution of Rs in the different freeze-thaw stages to the total Rs emissions in the complete freeze-thaw process and presented the results in Table 2. As such, Figure 3 was removed from the manuscript. In discussion, we have supplemented the range of the soil temperatures at the different freeze-thaw stages.

Please also note the supplement to this comment:

<https://www.the-cryosphere-discuss.net/tc-2019-214/tc-2019-214-AC3-supplement.pdf>

Interactive comment on The Cryosphere Discuss., <https://doi.org/10.5194/tc-2019-214>, 2019.

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