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Interactive comment on "A global Budyko model to partition evaporation into interception and transpiration" *by* Ameneh Mianabadi et al.

Anonymous Referee #2

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The Gerrits' model is applied to on the global scale using remote sensing data estimated maximum root zone storage capacity. The results are compared with two land surface model outputs. The results of the paper provide the global distributions of interception and transpiration. I have a few comments for the authors to consider for revision. Equation (3b): E = Ei + Et. Since Ei includes soil evaporation, I would suggest to interpret this as ET = E +T where E is evaporation and T is transpiration. Page 3 Line 21: Does Et have the same definition as the Es defined in Line 16? Page 4 Lines 28-30: whys accounting for n is rarely necessary? Maybe it is better to explain it briefly here. Page 5 Line 36: If the inter-annual variability of the Dt,m has any impact on the results? Page 5 Lines 37-37: "But in those relatively wet areas transpiration is underestimated in summer, but overestimated in winter, which will cancel out on the

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Discussion paper

annual scale." Delete the first "But"? Page 7 Line 32: year-1 Page 8 Lines 2-3: Is there any analysis in this study to demonstrate that the precipitation is the major factor that caused the different results from different models? Page 9 Lines 27-32: The global transpiration ratio estimated by Gerrits' model is larger than nearly all of the other studies listed, is there any reason? Page 10 Lines 27-29: Since the constant value of 0.935 mm in Equation 10 could be underestimated for the forest floor interception, then what value is advised for the forest floor?

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