We thank the reviewers for the positive reception of the manuscript, as well as all their comments and helpful suggestions. We have explicitly reported the nighttime ET results and discussed its influence on ET uncertainty. The language and structure were also revised in accordance with their suggestions.

Anonymous Reviewer #2

The authors study the effect of rainfall amount and timing on transpiration in an area (South Africa) where not much knowledge is known on this topic. Therefore, topic-wise I very much welcome this study. However, the way the study is done, how it is presented, and how it's discussed needs major improvement.

Major points of attention:

1) The authors study ET-partitioning; however, they seem to only consider transpiration and soil evaporation. What about interception? Also in Savanna-areas interception can play a big role (15-30%). See for example the work of:

- Bulcock, H. H. and Jewitt, G. P. W.: Field data collection and analysis of canopy and litter interception in commercial forest plantations in the KwaZulu-Natal Midlands, South Africa, Hydrol. Earth Syst. Sci., 16, 3717–3728, https://doi.org/10.5194/hess- 16-3717-2012, 2012.

- Tsiko, C.T., Makurira, H., Gerrits, A.M.J., and Savenije, H.H.G. (2012): Measuring forest floor and canopy interception in a savannah ecosystem, Physics and Chemistry of the Earth, Vol. 47-48, 122-127

I think the authors should include interception in their analysis if possible and/or clear discuss this limitation and influence on the found results

Thank you for this comment. We agree tha interception is important, especially with higher tree cover. In the Berkelhammer method we exclude rainy days from the calculation of half-hour T/ET values and thus those values do not include any interception. Although the eddy covariance system could be measuring interception in ET, this cannot be a large part of measured ET because most of the rainfall happens in the afternoon and evening. The mean maximum grass height was 10 cm for a one-year vegetation sampling period reported in a previous publication. Most of the grass is lower than this height due to the heavy grazing. If we assume 1 mm storage capacity per rainfall event for the grass, then 50 rainfall events per year will result to 50 mm interception (9% of annual rainfall). This assumes that all stored water is evaporated, which may not be true during nighttime conditions.

2) I am puzzled by Table 1.

- How is it possible that ET>P on an annual time scale?!?! This can only be the case when irrigation is applied. However, no information is given on this. And in case ir- rigation is used, this should be added to P. Maybe I misunderstand something, but I think it is highly surprising that the authors do not explain this. They only state that P<ET (P9L5). Where is this water coming from? On an annual basis ET<=P, when you assume no discharge and storage change. Or are the ET values wrong due to the non-closure of the eddy covariance? Please explain this, quantify it and adjust your results (e.g., in case of an EBC-problem distribute the non-closure to H and LE based on the bowen ratio.

We have restructured the Results section to address this issue. There is no irrigation at the site. One reason is the underestimation of rainfall due to (i) well-known issues with tipping bucket gauges and (ii) scale mismatch between rainfall and ET measurements. In the revision, we show explicitly that the gap-filled nighttime ET varies from 58 to 85 mm yr^{-1}. If the nighttime ET was assumed to be zero, then the ET/P would be below 1.0 for four years.

The use of the Bowen ratio method to force closure on the energy balance would actually add uncertainty. This type of forced closure requires us to assume that the two heat fluxes are underestimated by the same amount, and thus the Bowen ratio of the eddy covariance measured fluxes and Rn-G are correctly. The underestimation of the heat fluxes is often attributed to large-scale eddies (low frequency contribution to the co-spectrum of the two fluxes), which are impacted by entrainment processes and variability in sources and sinks at the land surface. Both of these are not similar for heat and water vapor. It is difficult to state how much of non-closure should be attributed to latent heat flux only. Also, it is worth noting that the net radiation measurement (Rn) is measuring only grass.

- The entire study build upon this ET that is larger then P, so I think the meaning of the T/ET-ratios are not meaningful.

Our conjecture is that the underestimation is on precipitation side and the spatial scale mismatch between ET and P. There is also gap-filling of nighttime ET that is an issue when dealing with annual hydrologic balance (less of an issue when portioning ET to E and T for a given averaging period).

- Furthermore, I do not understand the values of P. In the caption it is written that these are the values of the cite and that the values between brackets are from a nearby site. However, in the text (P9L1) the author say that the nearby site has higher rainfall amount, which isn't shown in the table. Please clarify, check and possible correct.

We have clarified the meaning of the rainfall measurements from the SAWS station. The fact that the SAWS rainfall is 139 mm yr^{-1} higher than the measurement site rainfall in 2011 and lower than the site rainfall during all the other years, supports the fact that the rainfall at the site was underestimated in 2011 due to poor performance of the tipping bucket sensor during heavy rainfall.

3) Presentation: Honestly, I am not an expert in the applied methods to estimate transpiration; however, I am familiar with ET-partitioning. Having said this, I think the authors can do a better job in explaining their used methods, so it's better understandable for a broader audience.

We have added a table explaining the methods (assumptions and input) and revised this section accordingly.

Minor:

- abstract: It's good practice to add the knowledge gap in your abstract (i.e. "missing knowledge on carbon uptake")

Stated as the role of precipitation variability on ET, transpiration and evaporation.

- units: throughout the manuscript the units are not correct. When speaking about annual rainfall/ET, T, E the unit is mm/YEAR and not just mm. Please correct

Corrected

- style: the HESS style states the parameters (ET, P, T, etc) should be in italic.

Corrected

- P2L6-7: I do not understand this sentence.

The sentence was revised. The evaporation from soils can persist over extended periods lasting more than a week.

- P5L3: What is WPL?

The standard Webb-Pearman-Leuning (WPL) density correction.

- P5 eq 1: add units to all symbols

Corrected

- P6L8: I am not getting this. E_u,k should be unitless if I see eq 2…

This ratio is multiplied by annual ET that was missing from the equation

- P6L9: Explain MDS, LE, and add that sigmaˆ2 is variance

It's Marginal Distribution Sampling that was defined in the gap-fill section. The section was revised.

- P7L4-6: what is the naming of this method uWUE or uWUEp. Please be consistent

This sentence was revised. The name of the method is Uwue, while uWUEp is the name for the slope of the fitted T=ET line.

- fig 2: y-axis should be labeled: Accumulated monthly transpiration [mm]

Corrected

- fig 7: what is the reasoning for using power-functions and not e.g., linear ones?

The points are fitted using linear regression.

- fig 9: unit of y-axis is mm/day

Corrected