Thank you to the authors for their innovative work. I hope the following review is helpful for the submitted article.

The authors have developed a novel, automated throughfall (TF) sampler that can be used to measure both throughfall and forest floor percolation. It is equipped with 3D-printed tipping buckets and a custom microcontroller board and was calibrated in the laboratory under controlled inflow. Sixty of these cost-effective samplers, each with four 600 cm² compartments, were installed by the authors in a mature, mixed temperate forest in southwestern Germany, to capture spatio-temporal variations in water percolating through the canopy and forest floor layers across different species. This monitoring setup enabled capturing of TF + forest floor interception at intra-event resolution. The sampler represents a significant methodological advancement in net precipitation measurements, and the combination of automation and network-level deployment in the study provides a valuable contribution.

The paper is well written and developed. However, I would encourage the authors to clarify few points described below and distinguish their concepts more clearly. In particular, the link between 'infiltration' (in this study, TF - forest floor interception) and 'throughfall' dynamics, as typically defined in interception studies, needs to be made clearer. Some figures and descriptions would also benefit from greater precision. Detailed comments are provided below.

General Comments

The monitoring network uses embedded samplers to measure water flux entering the ground. This approach is innovative, it effectively integrates both TF and forest floor percolation rather than just TF, which is typically the only factor measured in interception studies. however how its employed in this study, the collector cannot be used to calculate canopy interception loss (Eq. 1) in isolation, but rather requires support from other collectors or the exclusion of the forest floor. Or different approach to distinguish forest floor interception.

The authors do not provide an observation period that isolates TF collection alone for comparison with existing studies, which could clarify the accuracy of, or potential measurement errors in, the field setup. Further, this information can be helpful to distinguish impact of vegetation cover vs event features on TF and infiltration patterns. While the discussion focuses on TF dynamics and the influence of event characteristics, the study itself centres on estimating spatio-temporal patterns of water percolating below the surface. I would encourage the authors to reconsider the focus of the discussion and perhaps rename the instrument an infiltration sampler, since the current results cannot be directly compared with those of traditional TF studies due to the unclear separation of TF and forest floor interception. Alternatively, they could include a winter dataset (or another sampling period without foliage) to demonstrate TF-only conditions. If the sampler is the same or a follow-up to Paulsen and Weiler (2025), please discuss how forest interception and TF separation were handled in related observational work. Finally, some sentences are long and could be split for clarity (e.g., first paragraph of Section 2.1.1).

Methods

Figures 2 and 2.1.3 would benefit from a photo of the sampler in the field. While the authors describe the method as 'minimally invasive', digging the soil by 30 cm at multiple locations may alter the structure of the topsoil and create artificial flow paths. It is also unclear whether maintenance or troubleshooting would require re-digging each time. A photo and short explanation would greatly improve understanding.

(Line 195) It is unclear whether the collectors were positioned according to canopy density. If so, please elaborate on how many samples were placed within each canopy class (dense, medium or sparse) and the distances at which they were placed from stems in the plots.

The authors assume a two-hour interval between rainfall events based on canopy drip. However, the duration of canopy drip differs between conifers and broadleaved trees, and dense canopy cover may delay drainage further. Please elaborate on whether this interval varies between events or stands, and if so, within what range. Consider including one example event and quantifying the lag between gross precipitation and TF + forest floor infiltration measurements. As percolation through the forest floor can take even longer, a threshold of 2–4 or even 6–8 hours as is commonly used in TF studies might be more appropriate.

Also, in addition to citing Blume et al 2007 please consider to share how the C, run off coef. is adopted in this study via formula.

Results

The authors should consider using the same y-axis range for Figure 5. Please clarify whether the 'tipping bucket units' refer to the IDs of the individual collectors. If the collectors were placed according to canopy density, this should be indicated in the figure, as it would help to distinguish the timing of canopy storage filling from infiltration through the forest floor, the latter of which likely requires prior litter saturation.

It would also be useful to mark the start of the event and the onset of canopy drip along the x-axis.

Regarding Figure 6, are the LAI values of the sites comparable across events and stands? The difference between Events 4 and 5, which show lower variability and infiltration fractionation, may be linked to canopy storage saturation and the timing between consecutive events. Please report the time between the last event and the current event, as this could explain how antecedent conditions affect TF and infiltration patterns.

Discussion

(Line 330) With regard to infiltration, please comment on the time interval between events, since this directly affects canopy and forest floor interception, as well as water storage saturation.

Additionally, please consider discussing the applicability and limitations of the method in forests with dense understorey vegetation. Although the 30 cm excavation is described as 'minimally invasive', it could still disrupt the topsoil or alter flow pathways, and this should be acknowledged in the discussion.

While the discussion emphasises how event and vegetation characteristics modulate TF, the study does not include a comparison with conventional TF collectors. Therefore, it remains uncertain whether this collector can serve as an instrument suitable for estimating interception loss. The study's focus seems to be more on belowground percolation dynamics, which is an excellent contribution, but the authors should clearly decide which process (TF vs infiltration) constitutes the study's main objective.

While the event-based infiltration coefficient is a useful diagnostic metric, cross-checking it against standard throughfall collectors (e.g. funnels or troughs) at several points would be helpful. Without such validation, it is difficult to distinguish true canopy effects from sampler-specific biases (e.g. partial clogging or bypass flow).

Ultimately, however, the network and dataset make a valuable contribution to our understanding of precipitation partitioning in forests, particularly with regard to the role of vegetation structure in shaping throughfall and interception processes. If the authors wish to emphasise TF dynamics, I would encourage them to include a TF-only dataset (for example, from winter or leaf-off periods) to evaluate better intra-event TF dynamics and enable comparison with existing literature.