

## ***Interactive comment on “Global transpiration data from sap flow measurements: the SAPFLUXNET database” by Rafael Poyatos et al.***

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Received and published: 7 January 2021

General comments: The SAPFLUXNET database represents an excellent undertaking by Poyatos et al., and these authors should be congratulated for a fine achievement. The paper is well laid out and clear and I only have a few minor comments for the authors that I hope will improve the manuscript. It will be good to see this paper/dataset published and I look forward to being able to contribute to it and to make use of it in the future. One suggestion for an improvement is to highlight an example of where the dataset has been used to answer an experimental question. For example, is there a dataset that can demonstrate the impact of an abiotic stress on sap flow for different species? Specific comments: Line 290: The main line of inquiry is not how plants regulate transpiration, but rather how transpiration varies with abiotic factors and along

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environmental gradients in different species. Perhaps the wording could be changed to something like “An improved understanding of transpiration and how variable this process is under different abiotic conditions, along environmental gradients and in different species is thus needed to. . .” Line 312: Several studies have also quantified sap flow of graminoid species; see for example Skelton et al. 2012 (There are other papers). Line 313: See Clearwater et al. 2009 for a non-invasive approach using non-invasive external probes. Also cite Clearwater et al. 2009 on line 351. References 1. Skelton, R. P., West, A. G., Dawson, T. E. & Leonard, J. M. External heat-pulse method allows comparative sapflow measurements in diverse functional types in a Mediterranean-type shrubland in South Africa. *Funct. Plant Biol.* 40, 1076–1087 (2013). 2. Clearwater, M. J., Luo, Z., Mazzeo, M. & Dichio, B. An external heat pulse method for measurement of sap flow through fruit pedicels, leaf petioles and other small-diameter stems. *Plant. Cell Environ.* 32, 1652–1663 (2009).

Line 361: It would be best to avoid acronyms to make the sentence (and other sentences) easier to read. It is much easier to read “heat dissipation or compensation heat pulse” in this sentence than to keep referring to where the acronym was first mentioned. Line 405: Are there plans for this site to be maintained? Can people continue to contribute? Perhaps state this up front.

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Interactive comment on Earth Syst. Sci. Data Discuss., <https://doi.org/10.5194/essd-2020-227>, 2020.

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