

## PROPOSAL FOR FLUXNET SYNTHESIS PUBLICATION FOR OPENED FLUXNET-LA-THUILE DATA SET



**Initial coordinators::** Albert van Dijk, Eva van Gorsel

**Collaborators needing access to data:** \_\_\_\_\_

**Affiliations:** CSIRO, Australian National University

### TITLE OF PAPER AND OUTLINE

#### **The coupled surface water and energy balance under wet canopy conditions**

This paper will analyse micrometeorological conditions and the water and energy balance during and after rainfall. While not solely relying on fluxnet measurements, these will play a role in addressing a subset of questions, including:

- Are energy and water balance measurements (inc. sonic and gas analyser sensors) useable during rainfall?
- If not, what is the effect of gap-filling strategies on reported site ET?
- What is the best way to estimate ET during wet canopy conditions?
- What are the main sources of energy for wet canopy evaporation during and after rainfall?

It is likely to be submitted to AgForMet, Journal of Hydrology, or a similar journal.

#### **References**

- Czikowsky, M.J., Fitzjarrald, D.R., 2009. Detecting rainfall interception in an Amazonian rain forest with eddy flux measurements. *Journal of Hydrology*, 377(1-2): 92-105.
- Van der Tol, C., Gash, J.H.C., Grant, S.J., McNeil, D.D., Robinson, M., 2003. Average wet canopy evaporation for a Sitka spruce forest derived using the eddy correlation-energy balance technique. *Journal of Hydrology*, 276(1-4): 12-19.

### PROPOSED SITES TO BE INVOLVED

Sites will be selected that report measurements during rainfall of: (1) the main energy balance components, (2) precipitation, (3) air temperature, humidity and wind speed; (4)  $u^*$ , and (5) eddy covariance derived sensible and latent heat flux. Sites will need to have at least one full year of data.

### PROPOSED RULES FOR CO-AUTHORSHIP

A draft of the manuscript will be circulated to the PIs of all sites used in the analysis. Data contributors who make an intellectual contribution in improving the m/s will be included as co-authors. If acceptable to the journal, those who do not make an intellectual

contribution will be included as group co-authors (Fluxnet Synthesis Group) and identified by name in under that moniker or in the acknowledgements.

**CVs:**

Prof Albert van Dijk: <https://researchers.anu.edu.au/researchers/van-dijk-aijm>

Dr Eva van Gorsel: [https://www.researchgate.net/profile/Eva\\_Van\\_Gorsel/](https://www.researchgate.net/profile/Eva_Van_Gorsel/)