

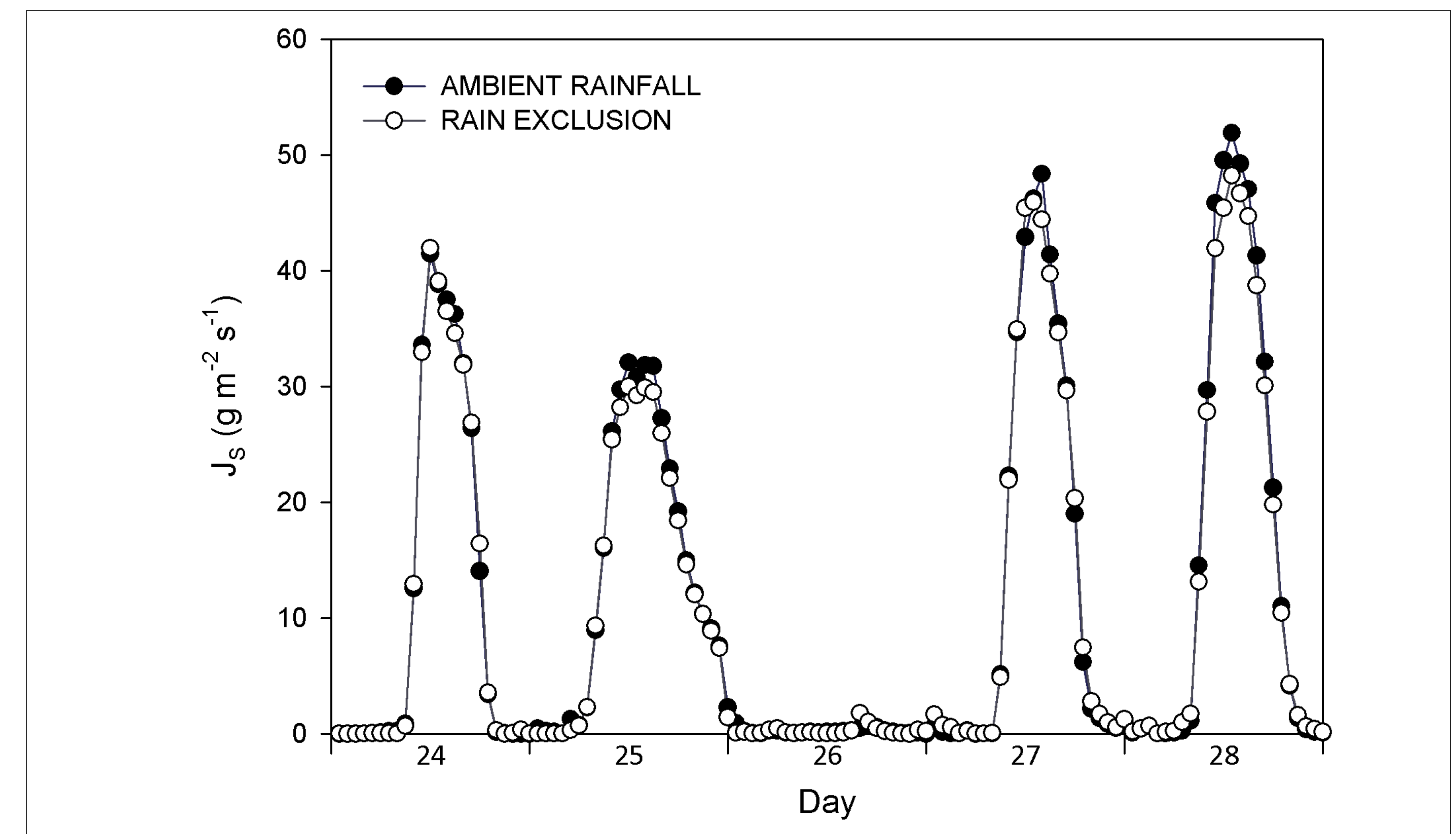
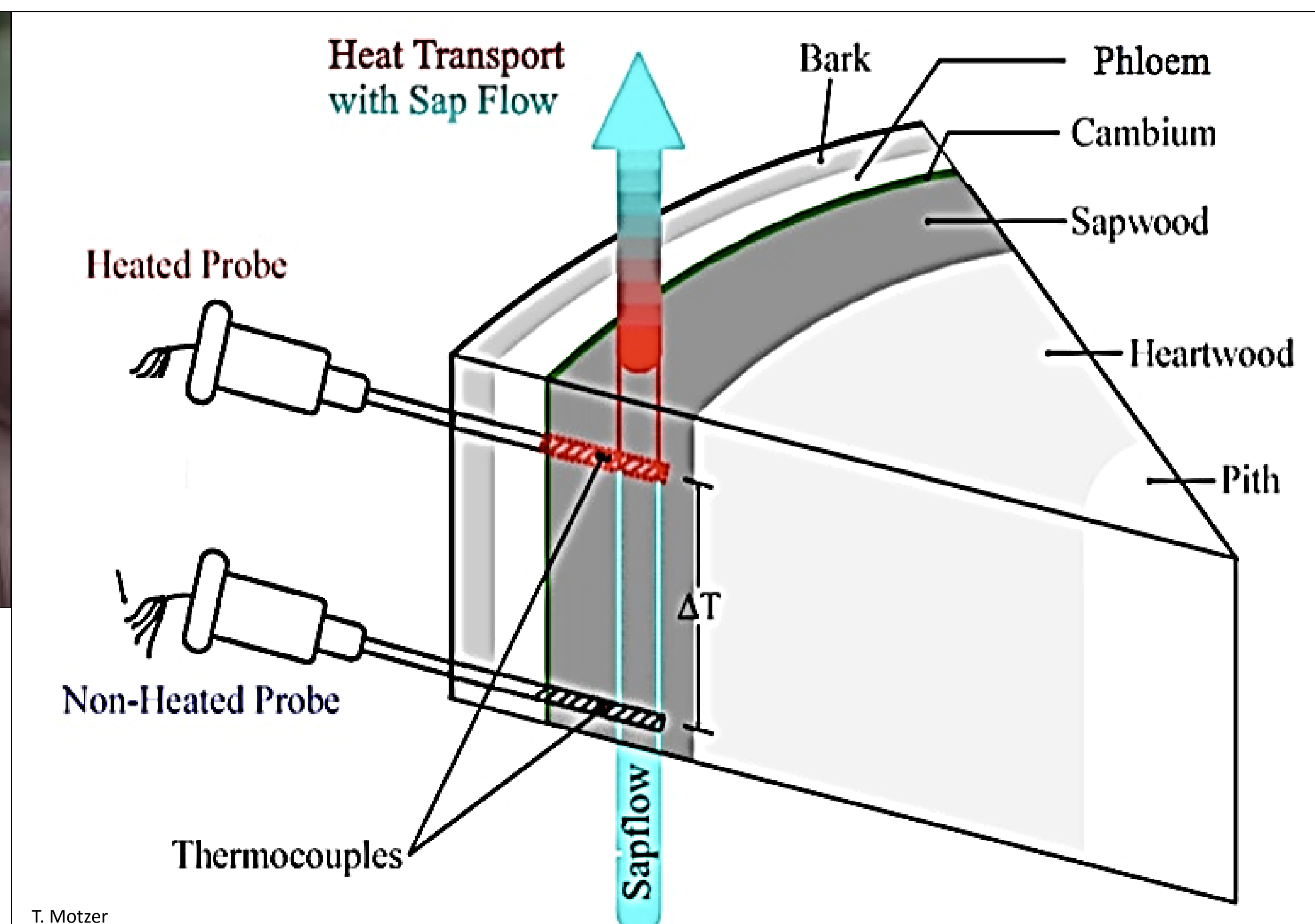


# Sap Flow Sensor Technology & Use of Data

PINEMAP 2013 Annual Meeting Field Tour  
Tier III site, Taliaferro County, GA

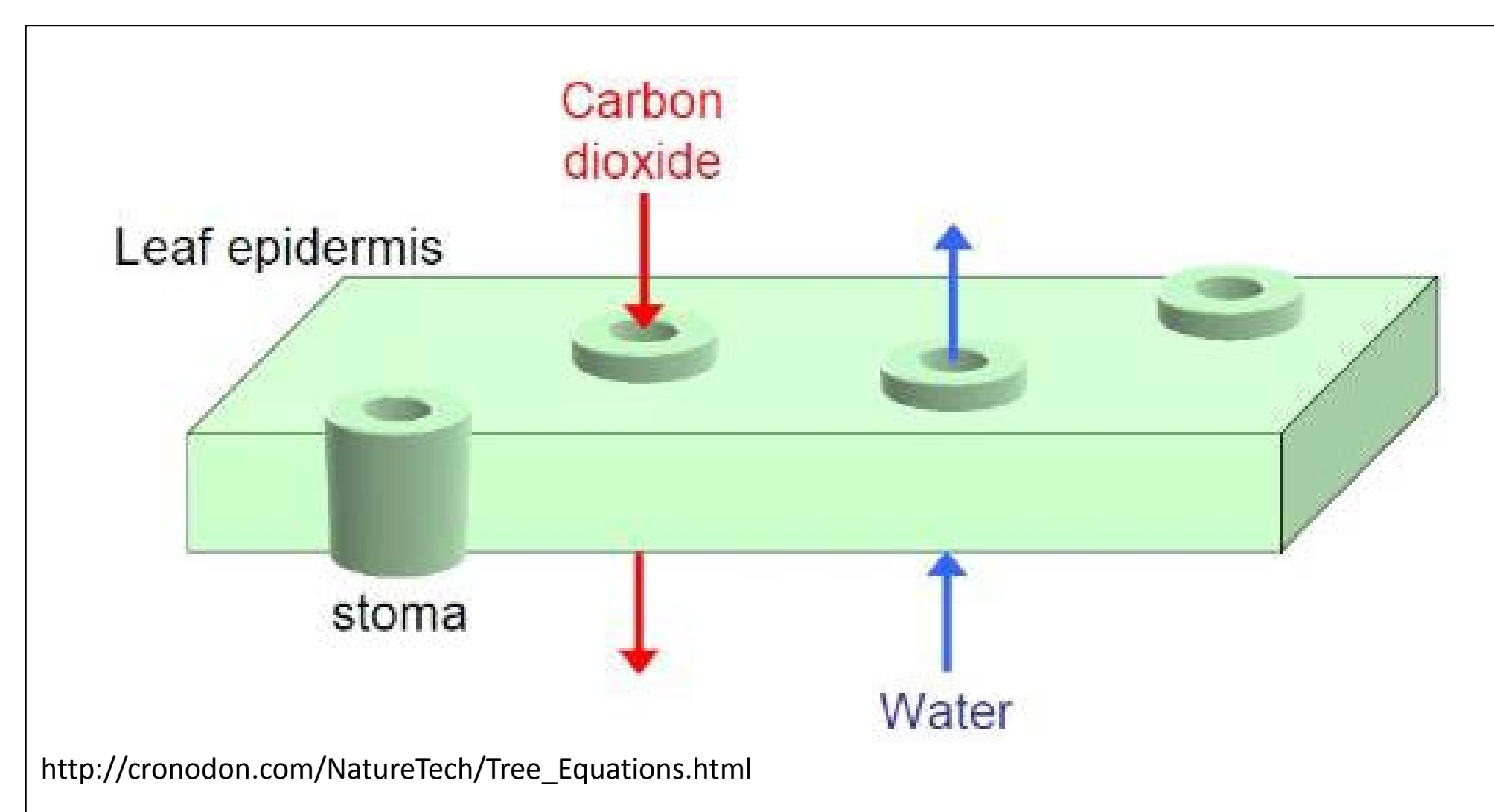


**Figure 1.** Schematic of Thermal Dissipation Probe sensor technology



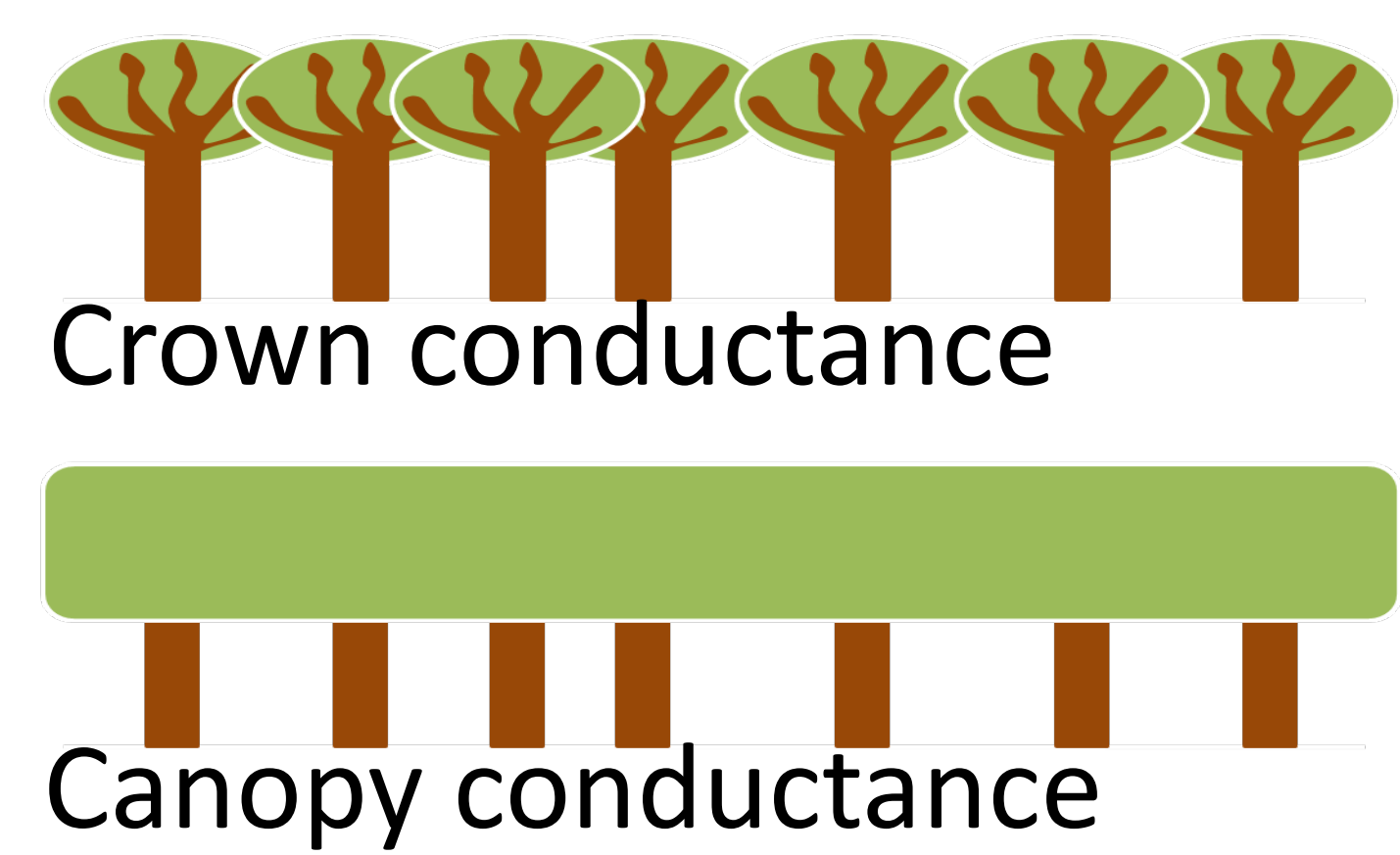
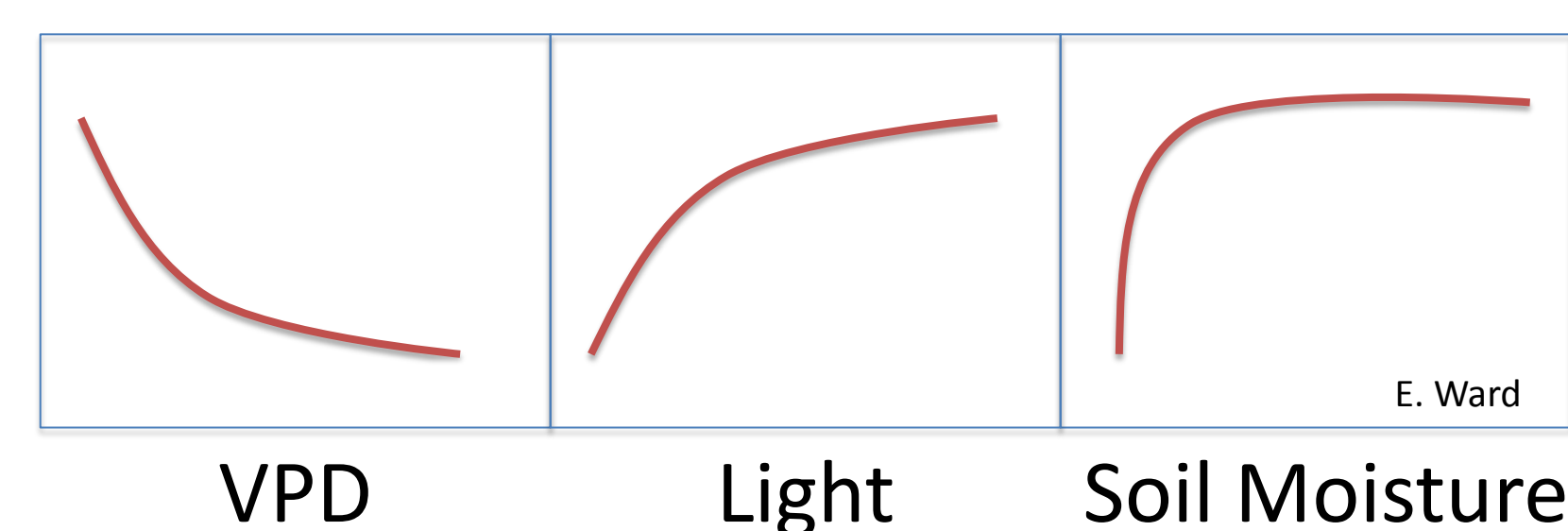
**Figure 2.** Diurnal sap flux at Washington, GA PINEMAP site, February 24-28, 2013.

$$E_T \approx \frac{c_p \rho_a}{\gamma \lambda} D g_c$$



[http://cronodon.com/NatureTech/Tree\\_Equations.html](http://cronodon.com/NatureTech/Tree_Equations.html)

Responses of conductance to VPD and soil moisture will be analyzed



E. Ward

**Figure 3.** Stomatal conductance, crown conductance, and canopy conductance.

### 3-PG: Physiological Principles in Predicting Growth

- Model uses physiological process data, statistical growth and yield models, and weather and site conditions to simulate the growth of forest stands (Landsberg and Waring, 1997)
- Field data will be used to parameterize the conductance functions of the model for all treatment combinations
- Measurements of actual tree water use will be compared with model outputs