

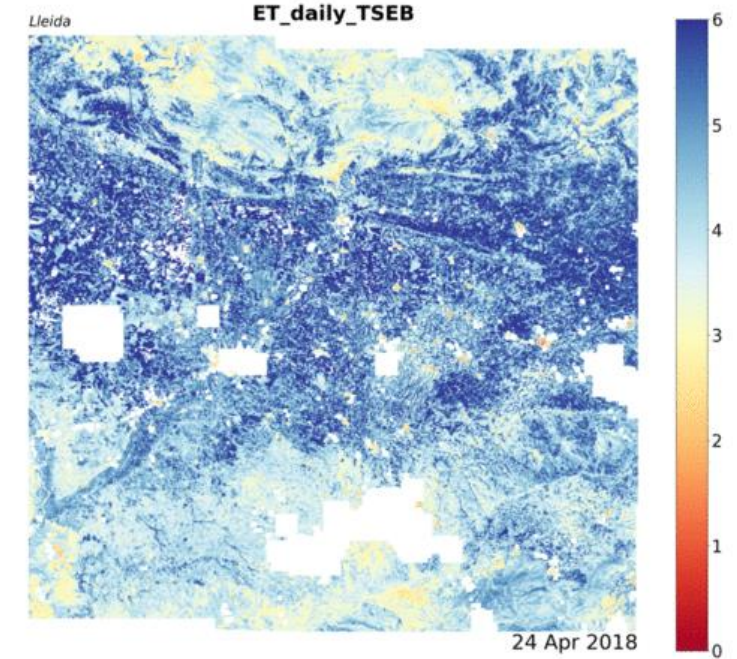
# Efficient Use of Water in Agriculture Program

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- To process biophysical parameters of the vegetation (S2) (**LAI, FAPAR, FVC, Cab, CWC**) and daily **ET maps** of the entire region of Lleida with S2+S3 imagery and the TSEB model (20 m resolution).

Also using ECOSTRESS LST products.

- To validate estimates of satellite ET with eddy-covariance data in the different study sites.
- To conduct some flights with an UAV, equipped with thermal + multispectral + RGB sensors in order to estimate ET and its partition components in the different study sites.
- To provide weighing lysimeters data of the apple orchard in Mollerussa, irrigated **100%ET<sub>c</sub>** and **Stressed**, as well as some physiological measurements.
- Monitoring soil moisture at the maize (Mollerussa) & alfalfa (La Cendrosa) fields.
- Field Spectrometry (ASD fieldspec).
- We (together with SMC & CNRM) will also be in charge of leading the dissemination of all the LIASE campaign to local press, TV, etc...





# Mollerussa site

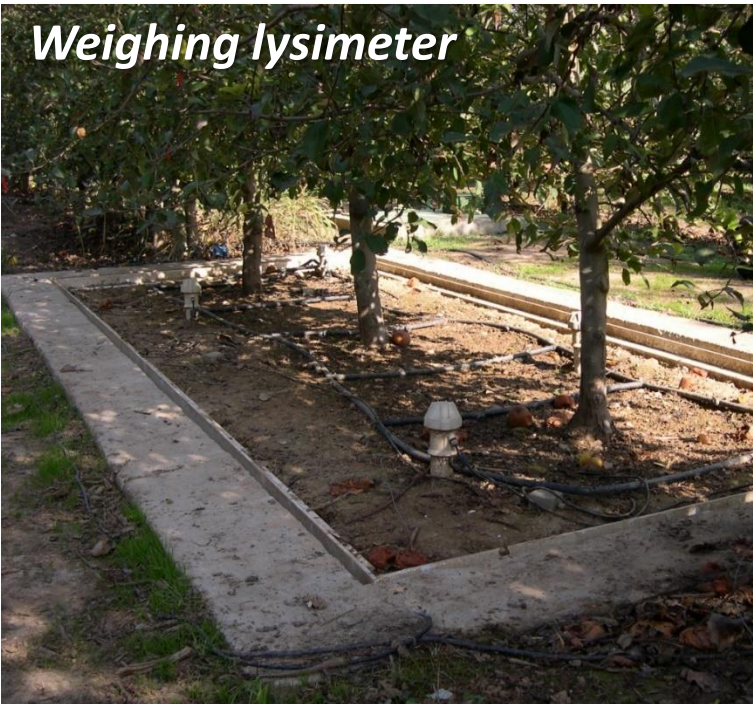


# Apple orchard

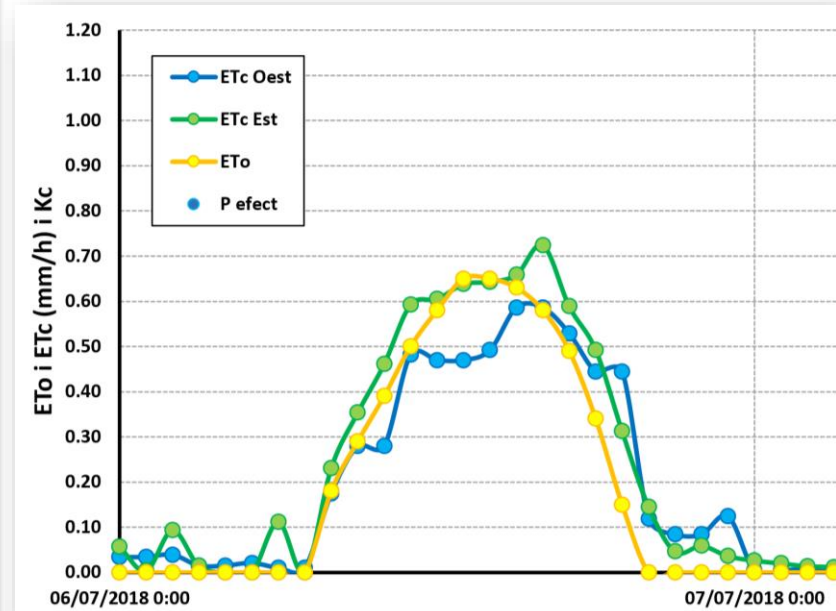


- Stem water potential
- Leaf transpiration
- Stomatal conductance
- Photosynthesis
- FIPAR
- IRT sensors

## Weighing lysimeter



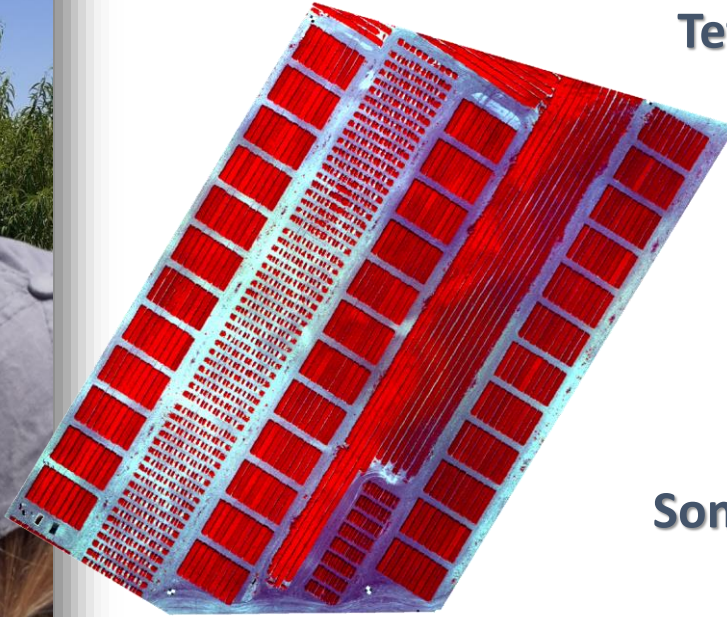
## Inside



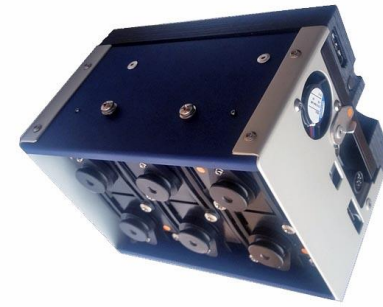




**MACAW  
TetraCam**



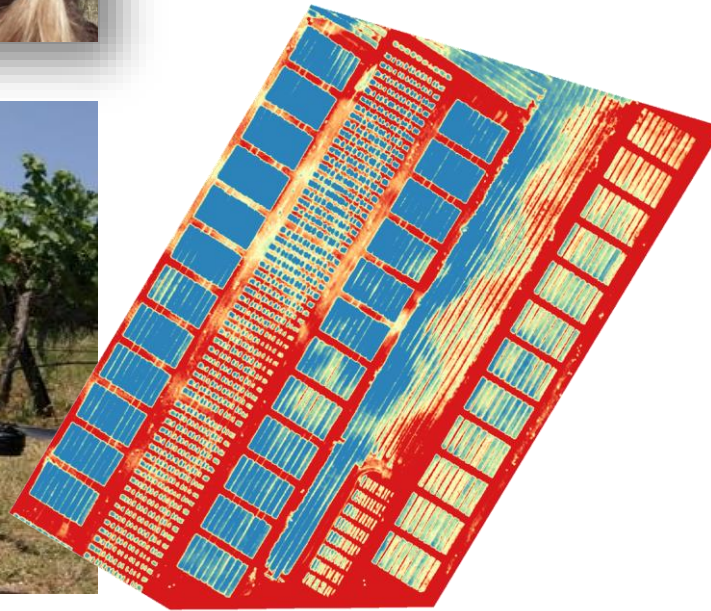
**RGB  
Sony α6000**



515.3 (Blue)  
570.9 (Green)  
682.2 (Red)  
710.5 (Red-edge)  
781.1 (Red-edge)  
871.8 (NIR)



**Thermal  
FLIR SC655**



**Field of view (FOV)** 45°

<b>Spectral range</b>	7.5-13 $\mu\text{m}$
<b>IR resolution</b>	640 x 480 pixels
<b>Detector pitch</b>	17 $\mu\text{m}$