

Session 4 - Vegetation photosynthetic efficiency, higher level products and applications



Presentations



1. HyPlant Images to Investigate the Capability of FLEX and Sentinels to Monitor a Mixed Forest Ecosystem, Giulia Tagliabue
2. Semi-Arid Ecosystem Monitoring: A New Perspective with Sun-Induced Fluorescence and Sentinel Observations, Micol Rossini
3. Combined Observations of Red and Far-red Fluorescence to Disentangle the Impact of Different Environmental Stress Effects on Plant Photosynthesis, Alexander Damm
4. Daily and Seasonal Photosynthetic and Fluorescence Efficiencies for a Cornfield, Elizabeth M. Middleton
5. Plant Functional Traits and Canopy Structure Control on the Relationship between Photosynthetic CO₂ Uptake and Far-Red Sun-Induced Fluorescence in a Mediterranean Grassland Under Different Nutrient Availability, Mirco Migliavacca
6. Using Satellite Fluorescence to Estimate Vegetation Stress and Global Transpiration, Wouter Maes



Discussion – Seed Questions



- Linking with flux towers
 - Provide data subsets rapidly
- Field scale applications
 - Potential to downscale FLEX measurements?
 - Subpixel stress detection
 - Forest/vegetation structure impact on the fluorescence signal
 - Potential of exploiting drones or High Altitude Platforms?
 - Hovering uavs at 1km observe FLEX pixel
 - Hotspot mapping – consistent time series?
 - Stress detection
- Importance of complementary observation at high resolution for applications
e.g. thermal at field scale



Rossini

- S2 multi-temporal for moss, lichen, biocrust
- SFI based on ground spectrometer data
- Potential for early land degradation indicator in semi-arid areas
- Northern Latitude potential for lichen and mosses