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PORTICI – ITALY University of Naples Federico II Department of Agricultural Sciences



MICROMETEOROLOGY IN THE SOIL-PLANT-ATMOSPHERE CONTINUUM

ABSTRACT

The comprehension of the exchange mechanisms of water, carbon dioxide and heat through the soil-plantatmosphere system is fundamental to understand the mass and energy budget in agricultural and forest contexts. An understanding of the mass and energy fluxes in the soil-plant-atmosphere continuum is a major challenge due to the complexity of the processes involved and the heterogeneity of the land surface.

The session is open to a wide range of new studies in micrometeorology, with focus on the analysis and the quantification of the dynamic interactions between air, vegetation and land surface. Contributions on the atmospheric transport and near-surface exchange of momentum, energy, and mass in natural landscapes are welcomed. The interest spans an entire spectrum of scales from turbulent eddies to inter annual variability of carbon dioxide and water fluxes of ecosystems. Of special interest are comparisons of experimental data, parametrizations and models by including trace gas fluxes as well as water, carbon dioxide and other GHG fluxes. Specific focus is given to outstanding problems in land surface boundary layer descriptions such as complex terrain and energy balance closure.

MORE INFORMATION www.metroagrifor.org info@metroagrifor.org

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We welcome contributions that:

- assess the quality of micrometeorological measurements;
- present new measurement techniques;
- show novel findings on surface layer theory and parametrization at the local scale;
- compare mass and energy fluxes estimates obtained with different in situ measurement methods, or compare in situ measurements and modeled or remotely sensed fluxes;
- upscale point measurements to larger scales;
- analyze mass and energy fluxes trends for long time series and spatial patterns.

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