Geophysical Research Abstracts
Vol. 16, EGU2014-4188, 2014
EGU General Assembly 2014

Lysimeter Research Group - A scientific community network for lysimeter research

Peter Cepuder (1), Reinhard Nolz (1), Andreas Bohner (2), Andreas Baumgarten (3), Gernot Klammler (4), Erwin Murer (5), and Bernhard Wimmer (6)

(1) Hydraulics and Rural Water Management; University of Natural Resources and Life Sciences, Vi, Water, Atmosphere and Environment, Vienna, Austria (peter.cepuder@boku.ac.at), (2) Agricultural Research and Education Centre Raumberg-Gumpenstein, Austria, (3) Institute for Soil Health and Plant Nutrition – AGES, Austria, (4) Institute for Water, Energy & Sustainability, JOANNEUM Research Graz, Austria, (5) Institute for Land and Water Management Research, Federal Agency for Water Management, Austria, (6) Environmental Resources & Technologies, AIT Austrian Institute of Technology

A lysimeter is a vessel that isolates a volume of soil between ground surface and a certain depth, and includes a sampling device for percolating water at its bottom. Lysimeters are traditionally used to study water and solute transport in the soil. Equipped with a weighing system, soil water sensors and temperature sensors, lysimeters are valuable instruments to investigate hydrological processes in the system soil-plant-atmosphere, especially fluxes across its boundary layers, e.g. infiltration, evapotranspiration and deep drainage. Modern lysimeter facilities measure water balance components with high precision and high temporal resolution. Hence, lysimeters are used in various research disciplines – such as hydrology, hydrogeology, soil science, agriculture, forestry, and climate change studies – to investigate hydrological, chemical and biological processes in the soil.

The Lysimeter Research Group (LRG) was established in 1992 as a registered nonprofit association with free membership (ZVR number: 806128239, Austria). It is organized as an executive board with an international scientific steering committee. In the beginning the LRG focused mainly on nitrate contamination in Austria and its neighboring countries. Today the main intention of the LRG is to advance interdisciplinary exchange of information between researchers and users working in the field of lysimetry on an international level. The LRG also aims for the dissemination of scientific knowledge to the public and the support of decision makers. Main activities are the organization of a lysimeter conference every two years in Raumberg-Gumpenstein (Styria, Austria), the organization of excursions to lysimeter stations and related research sites around Europe, and the maintenance of a website (www.lysimeter.at). The website contains useful information about numerous European lysimeter stations regarding their infrastructure, instrumentation and operation, as well as related links and references which may help scientists to find an appropriate research site for potential cooperation projects. Currently, the website is becoming revised and updated.

Up to now the LRG counts 485 registered members from 54 countries. Registration is possible free of charge via www.lysimeter.at. The LRG wants to attract new members from all over the world, intensify co-operation with other research groups, and enhance and support new and innovative ideas and technologies in lysimeter research.