universität wien

Fakultät für Physik

Isotopenforschung und Kernphysik

E I N L A D U N G

zum

V E R A - S E M I N A R

von

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Whence and Whither?
Potential and Power of Modern Isotopic Analysis for Tracing in Ecosystem Research

Continuous advancements and improvements of modern analytical instruments allow for the determination of the isotopic composition of stable isotopes of a steadily increasing number of elements. These developments also lead to improved measurement precision and make the determination of small isotope variations possible. This results in the possibility of using isotopic and elemental fingerprints as intrinsic markers to study, trace and model environmental processes and transport pathways. Today, isotopic analysis is widely recognized as highly potential key tool in diverse research disciplines, such as ecochemistry, geochemistry, hydrology or biology. The different isotopic systems allow e.g. for the investigation of elemental cycles in nature, the determination of migration in terrestrial and aquatic systems, the tracing of anthropogenic contaminants or the assessment of mass fluxes in ecosystems. In this talk, an overview about the possibilities and the potential of modern isotopic analysis in environmental sciences is given, with a particular focus on strontium as key tool to study transport processes in biological systems.

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