Master student or laboratory assistant project studying nutrient supply effects on plant physiology and metabolism by means of stable isotopes

Introduction: The analysis of the stable isotopic composition of compounds derived from soil and sediments is a widely applied tool to investigate climatic-change and land-use effects on plants. Both effects may alter the availability and uptake of N species such as nitrate and ammonium and thus the plants` metabolism and physiology.

Experiment: We performed an experiment under controlled environmental conditions with tobacco plants that were grown under different concentration of ammonium and nitrate, which strongly altered their physiology and metabolism.

Objective: We want to investigate whether the information on the N species supply is imprinted on the hydrogen isotopic composition of leaf-derived fatty acids and n-alkanes.

Where: The research will be conducted at the University of Zürich in the Isotope Laboratory of Guido Wiesenberg, in close cooperation with working groups at Forest, Snow and Landscape Research Institute WSL Birmensdorf (Dr. Marco Lehmann) and ETH Zürich (Dr. Roland Werner). We are seeking for a master student or a laboratory assistant, who is interested to work in a cutting-edge isotope laboratory, to perform chemical laboratory work, to conduct the isotopic analysis using modern GC-IRMS instruments. The applicant should have experience with laboratory work and high attention to detail. Please send your application (short motivation letter and CV) to Guido Wiesenberg guido.wiesenberg@geo.uzh.ch and marco.lehmann@wsl.ch.