

Post-Doctoral Research Associate (renewable for up to 3-years)

Focus: Carbon cycle science/atmospheric chemistry/infrared absorption spectroscopy

Institution: Ecology & Evol. Biology and Biosphere 2, University of Arizona, Tucson, AZ

Start Date: Spring/Summer 2008

We seek a creative post-doctoral scientist with strong background in both physical and ecosystem/carbon cycle science to work with an interdisciplinary team on deploying a new optical spectrometer (using Quantum Cascade Lasers, QCL) for measurements of CO₂ and its rare isotopes in both the field and within Biosphere 2. The science goal is to study mechanisms controlling coupled carbon and water exchange between ecosystems and atmosphere.

Implementation goals of the project are two-fold: first, to deploy, test and interpret results from a new QCL isotope ratio spectrometer making long-term eddy-covariance measurements of the isotopic composition (¹³C/¹²C and ¹⁸O/¹⁶O) of CO₂ fluxes above Harvard Forest, Massachusetts; second, to configure and use similar instrumentation for mass balance and isotope studies as part of the University of Arizona's new program at Biosphere 2, the unique enclosed ecosystem system science facility outside of Tucson, AZ.

The position is based at University Arizona, but will involve significant time commitments in Boston, MA for the first year, during which the instrument would be deployed for testing and measurements at Harvard Forest (collaborating with scientists at Aerodyne Research, and at Harvard University's laboratory for atmospheric chemistry). Subsequent work would focus on interpretation of Harvard Forest data, and design and implementation of related Biosphere 2 studies.

This position provides exceptional opportunities to learn new techniques and to make major scientific contributions to problems of both scientific and societal interest using cutting-edge technology (see web page below for more project details). This is an interdisciplinary research program, and we do not expect candidates to be familiar with all of the relevant methods, although strong physical sciences background relevant to spectroscopic techniques or to field deployment of instrumentation is strongly desired. We expect to train the successful candidate in the relevant additional disciplines and skills (possibly including micrometeorology, forest ecophysiology and carbon cycling, isotope ecology).

Competitive salary and benefits are provided; the University of Arizona is an equal-opportunity employer.

To apply, send (electronically) a description of research interests, CV, and the names and contact information of three references to:

Dr. Scott Saleska
Ecology & Evolutionary Biology
University of Arizona
saleska@email.arizona.edu

For more information on this project (including instrument description) see web sites:

<http://eebweb.arizona.edu/faculty/saleska/research.htm> (Saleska group)

<http://www.b2science.org/> (University of Arizona Biosphere 2)