

Long Job Description

Research Scientist II-Special/UV-B Monitoring and Research Program Natural Resource Ecology Laboratory

The USDA UV-B Monitoring and Research Program (UVMRP) at the Natural Resource Ecology Laboratory, Colorado State University seeks a full-time Research Scientist II. The position will be responsible for providing scientific expertise regarding the measurement and modeling of UV atmospheric radiation and for providing modeling expertise related to linking climate and crop models for the purpose of forecasting crop yield under various climate change scenarios. The position is supported by a USDA grant that funds the establishment and operation of a national network of surface solar radiation monitoring sites. Currently 37 UV radiation monitoring sites exist in the USDA UVMRP network. Emphasis is on the region of ultraviolet radiation commonly referred to as "UV-B", an area of the solar spectrum identified as responsible for plant and materials damage as well as human health problems. Since UV-B radiation has been significantly affected over the past two decades as a result of stratospheric ozone reduction, monitoring of current radiation levels, natural variations, and trends are critical to the understanding of the potential impacts on agricultural productivity and human health. The USDA UV-B Monitoring and Research Program coordinates with other federal agencies with UV-B measurement programs as well as those in Canada, New Zealand, and Europe and works with the U.S. Weather Service, Canadian Atmospheric and Environment Service, and World Meteorology Organization (WMO) to establish an international data base for UV-B.

The responsibility of the position is twofold in nature. First, the successful applicant will be expected to provide scientific expertise in the techniques of atmospheric radiation theory and measurement in the UV radiative spectrum. The candidate will coordinate with project members working on other aspects of the UVMRP, specifically in the development of network-based products and statistical analyses of temporal and spatial data through improved algorithms and quality control of the UVMRP database. The applicant will be responsible for quality assurance of the UV data collected by the network and will be required to attest to the fidelity of the UVMRP monitoring observations through instrument calibrations and data processing procedures and standards. Second, the candidate will be responsible for developing integrated agricultural meteorological models that are coupled with climate change and variations of ultraviolet-visible solar radiation by use of remote and in-situ observations. This position will actively participate to seek and submit proposals to obtain additional project funding from other grant sources. Reporting research results through conference presentations, written reports, and peer-reviewed articles is also expected.

Qualifications:

The successful candidate must have earned a PhD in Agricultural Meteorology, Atmospheric Sciences, Plant Physiology, Applied Statistics or related discipline. Knowledge of the effects of the atmosphere on the transfer of UV radiation including the effects of clouds, aerosols and gases is desired. An understanding of basic radiation transfer modeling is preferred. Familiarity with atmospheric radiation measurement technology is strongly preferred including the ability to scientifically evaluate the short and long-term performance of instrumentation, although expertise at the level of electronic engineering is not required. Experience running numerical models and simulation modeling of agricultural and natural resource systems is required as well as

excellent and demonstrated verbal and written communication skills. A sound understanding of computer simulation software/GIS software, data assimilation, relational databases, and system analyses; are desirable. Applicants with previous experience in ecosystem, climate and /or land-surface modeling, and programming and debugging ability are preferred.

Although this long-term program has been running for over 16 years, funding of the position is dependent upon continued federal support that is renewed on an annual basis. This position is dependent upon performance and continued availability of funding. Salary is negotiable, commensurate with experience, in the range of \$70,000-\$76,000 per year, with benefits. Start date will be as soon as practical upon selection of a candidate. Availability for an interview in Fort Collins is required and reasonable travel costs will be reimbursed including coach airfare (no business class) and lodging in standard rooms (not upgraded rooms); shuttles, mileage and per diem while travelling are also included. A link to the detailed job description can be found at <http://uvb.nrel.colostate.edu> under *Latest News*. To apply, send a CV, statement of research interest, list of publications and three letters of reference to Rita Deike, Program Assistant, USDA UV-B Monitoring and Research Program, Colorado State University, 419 Canyon Avenue, Suite 226, Fort Collins, CO 80521-2671; and a PDF file by e-mail to openposition@uvb.nrel.colostate.edu; The deadline and postmark for applying is December 1, 2009.

Colorado State University is committed to providing a safe and productive learning and living community. To achieve that goal, we conduct background investigations for all final candidates being considered for employment. Background checks may include, but are not limited to, criminal history, national sex offender search and motor vehicle history.

Colorado State University is an equal opportunity/affirmative action employer and complies with all Federal and Colorado State laws, regulations, and executive orders regarding affirmative action requirements in all programs. The Office of Equal Opportunity and Diversity is located in 101 Student Services Building. In order to assist Colorado State University in meeting its affirmative action responsibilities, ethnic minorities, women and other protected class members are encouraged to apply and so identify themselves.