

CIRES/CSD Aerosol Mass Spectrometer Research Associate CSD-30

Position Type: Research Associate

Position Posted: September 23, 2015

A Research Associate position for postdoctoral work is available in the Cooperative Institute for Research in Environmental Studies (CIRES) at the University of Colorado-Boulder. The successful applicant will work at the U. S. National Oceanic and Atmospheric Administration – Earth System Research Laboratory/Chemical Sciences Division (NOAA ESRL/CSD). He or she will participate in laboratory and field work using a customized Aerodyne Time-of-Flight Aerosol Mass Spectrometer (ToF-AMS) and be involved at all levels of its scientific data analysis and subsequent publication. The work entails collaboration across several groups in CSD, where there are a variety of opportunities to pursue cutting-edge research on the physical and chemical effects of aerosol particles in the troposphere. There is particular emphasis on upgrading the ToF-AMS instrument and participating in the upcoming FIREX fire science laboratory study, which requires 6-8 weeks of field work in Missoula, MT, during the fall of 2016. The initial term of the appointment is for one year, with a possibility for extension to a maximum of three years.

Responsibilities

- Operate and calibrate a semi-custom, Aerodyne Time-of-Flight Aerosol Mass Spectrometer (AMS) with a light-scattering module.
- Use this instrument to study aerosol chemical composition in the laboratory and ambient atmospheric aerosols, including field work at the U.S. Forest Service Fire Sciences Laboratory.
- Combine the AMS data with other aerosol and gas-phase measurements.
- Provide support with data analysis and laboratory work for past field projects involving the AMS.
- Present results at scientific meetings and publish them in peer-reviewed journals.
- Background information about the CAP research group, techniques, previous publications and upcoming projects is available on several web pages (<http://www.esrl.noaa.gov/csd/groups/csd2/>, <http://www.esrl.noaa.gov/csd/staff/ann.m.middlebrook/>, <http://www.esrl.noaa.gov/csd/projects/firex/>, <http://www.firelab.org/>).

For more information, please contact Dr. Ann Middlebrook (ann.m.middlebrook@noaa.gov).

Minimum Qualifications:

- Doctoral degree in chemistry, atmospheric sciences, environmental engineering, engineering, physics, or related field.
- Publication (or submission for publication) of at least one first author paper in the peer-reviewed literature.
- Experience in design, construction, operation, and/or maintenance of custom-built scientific instrumentation.

Required Skills and Abilities:

- Capability for self-guided, motivated, and original research.
- Excellent skills in the operation and maintenance of advanced instrumentation, ideally acquired by involvement in instrument design and construction.

- Demonstrated ability to present results at scientific meetings and publish them in peer-reviewed journals.
- Ability to perform required duties associated with ~2 month field deployments in support of focused measurement campaigns.
- Ability to work well with other researchers and support staff in a collaborative research environment.

Desired Qualifications

- Experience with mass spectrometry, laser systems, vacuum technology, aerosol instrumentation, as well as computer programming and/or complex data analysis (especially Igor Pro).
- Experience with laboratory or field studies of atmospheric chemistry.
- Strong recommendations from research advisors.

Position Benefits

The position will be filled as a Research Associate at the University of Colorado Boulder and will be eligible for employee benefits, including 22 days of vacation (for a 100% position) per year.

Required Application Materials

To Apply:

Applicants must complete the Faculty/University Staff and EEO Data (application) form, and upload the required documents:

1-CV

2- Proof of highest degree earned (copy of diploma or unofficial transcripts)

3- A cover letter

4- List of three professional references with all contact information from whom an official written letter of recommendation will be requested at the appropriate time during the search.

The University of Colorado is an Equal Opportunity Employer committed to building a diverse workforce. We encourage applications from women, racial and ethnic minorities, individuals with disabilities and veterans. Alternative formats of this ad can be provided upon request for individuals with disabilities by contacting the ADA Coordinator at hr-ada@colorado.edu.

The University of Colorado Boulder conducts background checks for all final applicants being considered for employment.