Postdoc in Source Inversion Support
University of Maryland

A position is available for a postdoctoral researcher interested in improving the source attribution capabilities of the HYSPLIT model and performing meteorological simulations for dispersion modeling projects. This postdoc would work with the Transport Modeling & Assessment group at NOAA Air Resources Laboratory (ARL) in College Park, Maryland.

The work includes:
(1) Improvement of source attribution calculations using HYSPLIT
ARL seeks to improve an approach to objectively and optimally estimate emission source strengths based on field observations. Toward that end, ensemble HYSPLIT model simulations will be performed and a cost function will be defined to quantify the model and observation differences, weighted by the model and observation uncertainties. Minimizing the cost function by adjusting source strength at the known source locations to match the model predictions with the measured air concentrations determines the emissions.

(2) Meteorological and dispersion simulations
To better describe the mesoscale features in the modeling domain that influence dispersion calculations, ensemble meteorological simulations need to be conducted using the WRF-ARW with data assimilation, which incorporates observations through objective analysis and various nudging strategies. This work will involve running the ensemble WRF model at high resolution for several analysis periods and subsequently running the HYSPLIT model.

Minimum qualifications for this work include: Ph.D. in atmospheric sciences or related subject; proficiency running WRF; experience with transport and dispersion models such as HYSPLIT; knowledge of Linux, Fortran, and scripting.

Interested applicants should send a cover letter, resume or CV and a list of three references with contact information including mailing address, phone number and email address to: aosc-jobs@umd.edu   For best consideration apply by February 8, 2016, however, applications will be accepted until the position is filled.