

A post-doctoral research scientist position focused on the \*impact of climate on air quality\* is available through the University of Maryland, Baltimore County Goddard Earth Sciences and Technology (GEST) Center, U.S.A. The preferred location for this post is at the National Oceanic and Atmospheric Administration (NOAA) Geophysical Fluid Dynamics Laboratory (GFDL) in Princeton, NJ, U.S.A.

**\*Description\***

We seek a post-doctoral research scientist to investigate interactions between climate and air quality in the GFDL chemistry-climate model, a fully coupled atmosphere-ocean-ice-land GCM including stratospheric and tropospheric (aerosol and gas-phase) chemistry. This work is expected to be conducted in close collaboration with scientists at NASA Goddard Space Flight Center (GSFC) and represents a joint effort between GSFC and GFDL to improve climate-air quality simulations in the current generation of chemistry-climate models. The candidate should have a strong interest in identifying constraints on relationships between air quality (ozone and aerosols) and meteorology available from in-situ measurements and satellites over recent decades, and using those constraints to evaluate and improve the simulation of interannual variability and trends. The GFDL model includes a dynamic vegetation model, enabling exploration of impacts from the biosphere on air quality (e.g., fires, biogenic emissions, land-use). A major endeavor will be to compare changes in regional air quality (including over the United States) projected for the next century under several scenarios (e.g., IPCC-AR5) for changes in climate and emissions of trace gases and aerosols and to identify key processes controlling how air quality responds to climate.

**\*Requirements\***

The position requires a Ph.D. in Atmospheric Sciences, Atmospheric Chemistry, or related fields. Experience in numerical modeling and/or data analysis of in-situ measurements and satellite products is highly desirable. Computing skills such as programming in Fortran, IDL or other visualization software would be an asset.