

# NOAA/DOE Climate Change Detection and Attribution Project

## FY 2005 Information Sheet

Proposals are solicited on all aspects of climate change detection and attribution. Detection is the process of demonstrating that an observed change in climate is unusual in a statistical sense, i.e., that the observed change is large relative to estimates of natural climate variability. We broaden this standard definition to include those proposals that not only document changes in climate, but also focus on producing a data set of adequate quality so as to be able to quantitatively identify decadal and longer-term variations and changes. Detection proposals will be considered on all aspects of documenting and assessing climate variations and changes including extreme events. Successful proposals will address data set errors in the context of defining significant changes. It is recognized that statistically significant changes may not be practically significant and vice-versa. In this regard detection proposals should not be constrained to limit their focus on the identification of statistically significant changes. Practically important variations as they may affect managed biophysical systems, socio-economic systems and ecosystems are quite relevant.

Attribution is the process of establishing cause and effect. Often these detection and attribution activities will not be part of the same proposal, e.g., attribution studies often rely on data bases and modeling simulations that have already been produced, but proposals will be entertained that combine both of these activities as well as those that focus solely on detection or attribution.

Attribution proposals will be considered that address part or all of the issues associated with identifying natural climate variability, making the linkage between specific forcings and observed climate change and variations. Critical components of these proposals will often include the use of climate model simulations, statistical techniques, and long-term climate data, including paleoclimate data.

### **TECHNICAL DETAILS**

Proposals will be considered for up to three years in duration, but one and two year proposals are encouraged. Funds for each subsequent year of multi-year proposals will be subject to a review of annual progress reports.