

## Antarctic Trace Gas and Aerosol Airborne measurement Study (AGAMES)

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### **Related International Research Project**

Japan-German Airborne Observation program(ANTSYO)  
Vertical distribution of aerosols at high latitudes in both hemispheres using airborne laboratories, 2004-2007

### **Description of the Program**

Behavior of greenhouse gases and direct and indirect radiative effects of aerosols have been identified as the key uncertainties for the prediction of the future climate and global warming. Long term monitoring of atmospheric constituents in the Antarctic shows the importance of transport process as well as source and sink. In order to understand source, sink and transport of greenhouse gases and aerosols, their vertical distributions are indispensable to be clarified. Also knowledge of vertical distribution of aerosols is indispensable for the interpretation of past climate from ice core analysis. Air-sea exchange with marine ecosystem is another factor as a source and sink of atmospheric constituents. To solve these subjects, National Institute of Polar Research (NIPR) and Alfred-Wegener Institute for Polar and Marine Research (AWI) have planned a cooperative airborne atmospheric observation in the East Antarctic area around Syowa Station during 2005/06 (JARE 46) and 2006/07 (JARE 47) seasons. This is a part of Japan-German Airborne Observations Program (ANTSYO) including atmospheric and geophysics part, also with other Japanese and European institutions. Also this is a part of bi-polar airborne atmospheric aerosol observation project during 2004 - 2007.