

## CMDL Aerosol and Radiation Measurements During ACE-Asia

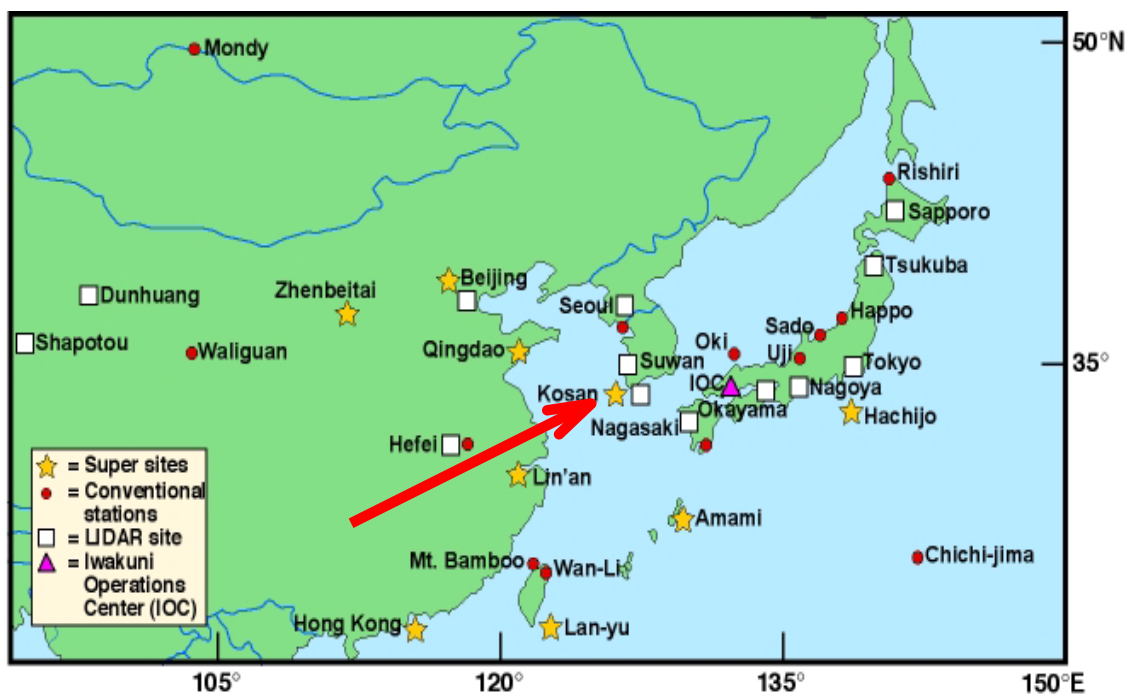
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The Aerosol Characterization Experiments (ACE) are designed to increase our understanding of how atmospheric aerosol particles affect the Earth's climate system. Results will lead to improvements in the ability to predict the influences of aerosols on the Earth's radiation balance. The Asian Pacific Regional Aerosol Characterization Experiment (ACE-Asia) is the fourth in a series of experiments organized by the International Global Atmospheric Chemistry (IGAC) program, a core project of the International Geosphere Biosphere Program. The ACE-Asia region includes many types of aerosol particles of widely varying composition and sizes derived from one of the largest aerosol source regions on Earth. These particles include those emitted by human activities and industrial sources, as well as wind-blown dust.

An Intensive Field Phase of ACE-Asia is being conducted during the spring of 2001 (March-May) off the coasts of China, Japan, and Korea. The Aerosols and Radiation Group at CMDL began making measurements of atmospheric radiation at various wavelengths and of aerosol chemical, microphysical, and optical properties at the Kosan Supersite (see map below) on the Korean island of Cheju in early April. Preliminary results from April and early May are presented and show significant dust and pollution aerosol plumes transported from the Southeast Asian mainland. These results will also help in the understanding of how future changes in aerosol concentration and composition may influence changes in the Earth's climate system as a whole.



Map showing ACE-Asia research area. The red arrow points to the Kosan Supersite, which is in a prime location to sample pollution and dust from the Asian mainland.