

## Estimates of the aerosol direct and indirect radiative forcing in China

Xiaolin Wu (1) and Chuanfeng Zhao (2)

(1) Beijing Normal University, Beijing, China (wuxiaolin46@163.com), (2) Beijing Normal University, Beijing, China (czhao@bnu.edu.cn)

In recent years, the air pollution in China is widely known and the heavy loading of aerosols has become the research focus. Aerosols affect the temperature, cloud lifetime and precipitation through the aerosol absorption and scattering properties. In order to investigate the regional difference of aerosol direct radiative forcing effect, we analyzed the long-term change of radiation and the time series of visibility in China by using observation data from the national weather station. We also detected the change of cloud lifetime due to the regional aerosol by employing the new haze data which is obtained by the daytime cloud and haze detection algorithm, and discussed the indirect forcing effects over study area. Through further discussion and analysis, we explored the meteorological and agricultural impacts caused by the pollution in China.