

THE AIR POLLUTION IN CHINA —ON-SITE AND REMOTE SENSING PM_{2.5} CONCENTRATIONS

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Commission ISPRS/IAG1

KEY WORDS: PM_{2.5}, on-site, satellite-derived, aerosol, pollution, China, fog, data-process

ABSTRACT:

The heavy fog and high PM_{2.5} concentrations are the major concerns of Chinese government and public. In the last winter the highest PM_{2.5} concentrations in Beijing has exceeded 900 µg/m³, which was an unprecedented high record. The heavy fog has caused serious public health threaten and traffic congestions in China. Some adjacent countries such as Korea and Japan are worrying about the possible trans-boundary transportation of high PM_{2.5} from China. For these reasons above we plan to study the spatial distribution and the transportation mechanism of the PM_{2.5}.

The PM_{2.5} concentrations of 190 cities were collected in the past months. These on-site data with the satellite-derived data are compared, and the on-site data is applied to correct the satellite-derived PM_{2.5} concentrations. The spatial distribution of PM_{2.5} in China were mapped and the main pollution sources of PM_{2.5} of the most polluted area in China are discussed. Furthermore the PM_{2.5} data is combined with meteorological data to study the transportation mechanism of PM_{2.5}.
