

# New research helps to understand regional aerosol models in China

October 11 2021, by Zhang Nannan

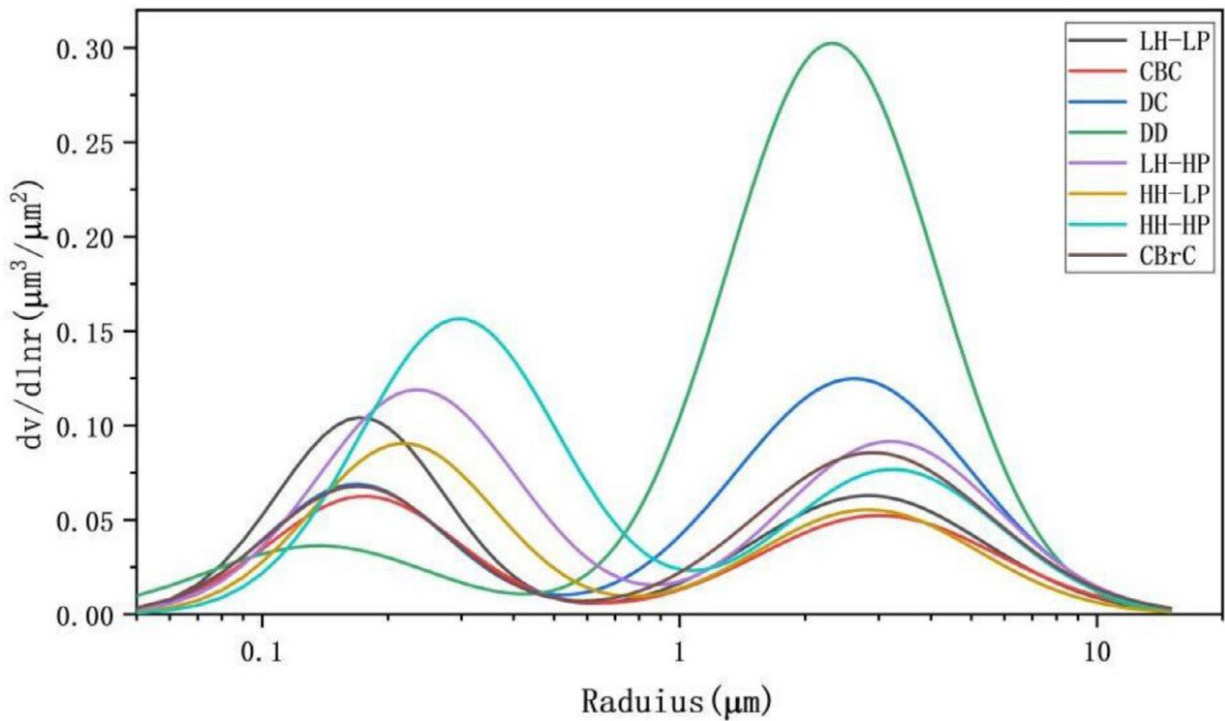


Fig. 1. Size distributions of the eight aerosol categories. Credit: FAN Yizhe

The aerosol model is generally adopted to describe typical aerosol properties in a specific region, and it is an indispensable input parameter in radiative transfer calculations.

According to a recently study, based on data acquired at aerosol robotic

network (AERONET) sites across China, researchers led by Prof. Sun Xiaobing from the Hefei Institutes of Physical Science (HFIPS) of the Chinese Academy of Sciences developed eight aerosol types to help obtain a better understanding of earth's atmosphere.

The researchers used cluster analysis to obtain eight aerosol models with the data. After analyzing the seasonal variations of the above aerosol types in the selected areas, they found that dust aerosols mostly appeared in spring, and high moisture absorption aerosols appeared mostly in summer. The frequency of carbonaceous aerosols reaches the maximum in winter.

This [study](#) presents a better understanding for not only physical and [chemical properties](#), but also temporal and spatial distribution of aerosols in China.

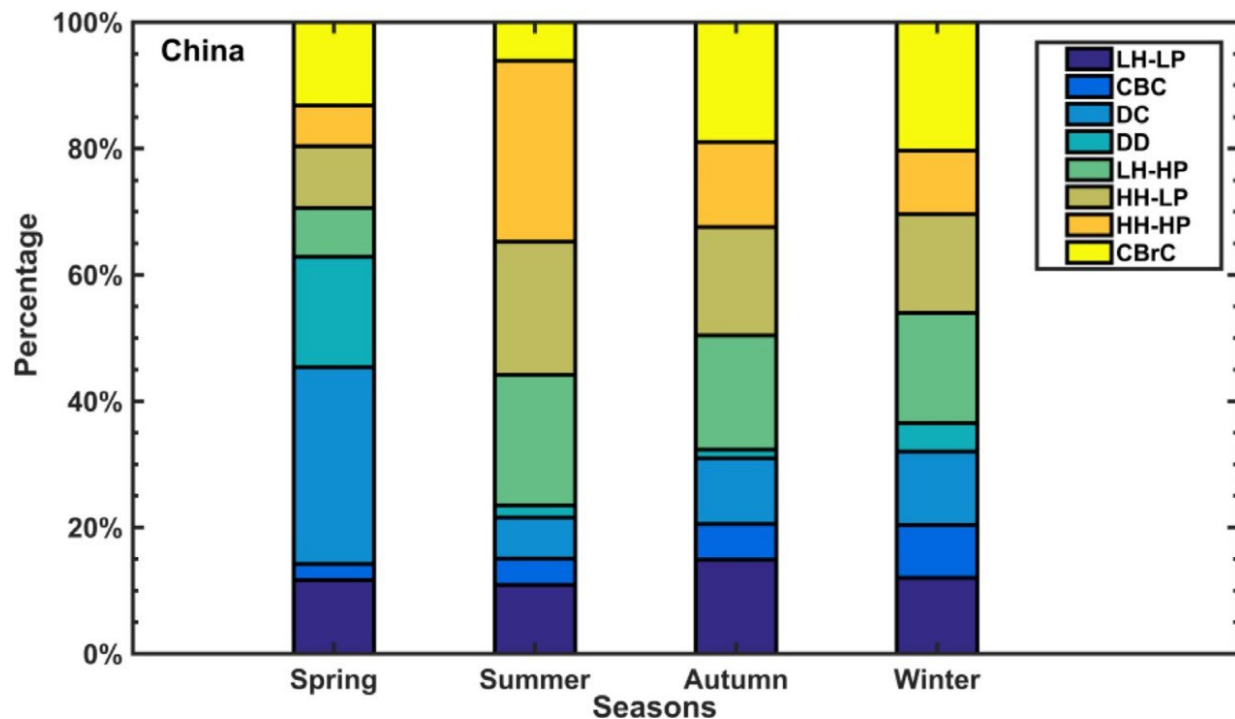


Fig. 2. Seasonal distributions of the aerosol models in China. Credit: FAN Yizhe

**More information:** Yizhe Fan et al, The primary aerosol models and distribution characteristics over China based on the AERONET data, *Journal of Quantitative Spectroscopy and Radiative Transfer* (2021).  
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