



## **Observation of Air Pollution with Mie-Scattering LiDAR in the Beijing-Tianjin-Hebei region**

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The heavy air pollution of Beijing-Tianjin-Hebei (BTH) Region is a significant negative factor for environment in North China. In winter, especially, the inland area situated in the temperate zone suffers from particle deposition and air quality sometimes drops to the warning line. Between December 2017 and January 2018, Beijing has issued three air pollution warnings and the condition has turned better than in previous years. To find out the sources of air pollution, 11 set of LiDAR are installed in observation stations of the BTH Region to gain continuous real-time data. The analysis has shown that the pollution level decreased from the southern suburb of Beijing to the northern during the air pollution warnings. Extending the scale to BTH Region, cities in the south of Beijing are all more polluted and the pollution level in BTH region increases from north to south, together with the air quality index (AQI) and the height of aerosol boundary layer increases in this direction. It has also shown that the air pollution sources are not located in traditional heavy industrial cities, but emerging ones in south of the region which are affected by relevant policies. Pollutants are transported along the south wind and damage the environment of Beijing and the whole area. These changes in the location of pollution sources should prompt the government to concentrate more on chain problems after heavy industry migration.