

1.013 Evaluation of surface emissions in Asia.

Early Career Scientist

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Abstract:

During the past few years, severe air pollution episodes were recorded in China, India and other regions in Asia. In order to understand the origin and evolution of these events, and to perform forecasts of air quality in Asia, it is necessary to have an accurate knowledge of the surface emissions involved in air pollution in this region. During the past few years, several inventories providing anthropogenic emissions for different regions in Asia were developed, as well as global emissions inventories. Depending on the inventory, the emissions are provided for different years during the 1960-2012 period.

We will present a comparison of the inventories available for this period for China, India, South-East Asia, Korea and Japan. The comparisons will focus on total anthropogenic emissions and emissions from traffic. Emissions for speciated volatile organic compounds, i.e. alkanes, alkenes, aldehydes and aromatics will also be discussed.

Emissions estimates of NO_x , SO_2 and VOCs for several regions in Asia were also quantified using inverse modeling techniques and satellite observations from the OMI and GOME-2 instruments. These optimized emissions will also be included in the analysis.