

1.212 Vertical Profile of Long Range Transport Aerosols Investigated by a Lidar Network in Taiwan during EMerGe-Asia.

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Abstract:

East Asia has been characterized as huge anthropogenic emission of aerosols and traces gases resulting from rapid growing of population in this region. Taiwan is located in between the southeastern coast of the Asian continent and the East Asian islands distributed among the western Pacific Rim. In the spring, winter monsoon and summer monsoon will transport natural and anthropogenic pollutants from mainland China and biomass burning smokes from Indochina to Taiwan respectively. The vertical distribution and the columnar optical properties of aerosols were observed by a lidar network involves 4 aerosol lidars and accompanying sunphotometers installed in Cape Fuguei, Taipei City, Taichung City, and Dongsha Atoll (Pratas Islands) and one wind lidar installed in Taichung City. WRF/CHEM and HYSPLIT are used to study the transportation pathway of aerosols from different sources.