Transpacific Transport of Eastern Asian Aerosols Based on the Climatology of MODIS Observations

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Eastern Asia is an important source for a variety of natural and anthropogenic aerosol emissions. The impacts of aerosols emitted from East Asia are not solely confined to areas near the emissions sources but are also observed at great distances from the source locations. The emissions of aerosols from Eastern Asia may have substantial impacts on climate, ecosystems, and human health in this region [*Xu et al.*, 1998; *Chameides et al.*, 1999]. A growing body of evidence exists for transpacific transport of aerosol pollution from Asia to the west coast of North America [Chand et al 2008; *Yu et al.*, 2008].

In this talk we will present long-term (ten years) trends in aerosol optical depth (AOD) at 550 nm from the Moderate Resolution Imaging Spectroradiometer (MODIS). Initial analysis indicates that transpacific transport of aerosols is most prominent during the spring. The aerosol influx over the western coast of the United States is estimated to be 34% of that leaving East Asia during spring, whereas it is <10% in other seasons. Autumn shows the lowest transport. Details results will be presented in the AOGS meeting.

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