



# MODIS Observing Distinct Regional Trends of Industrial/Urban Pollution Aerosol



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**Science Question:** How has industrial/urban pollution aerosol been changing in recent decades in response to economic growth and implementation of environmental policies?

**Approaches:** (a) satellite-model integrated analysis; (b) a novel method of separating pollution from dust

**Findings:** MODIS observations show distinct trends downwind of major pollution regions:

- declining in North America and Europe
- increasing in South Asia
- decreasing in East Asia in recent years

**Impact:** MODIS observations can be used to check the fidelity of models and guide model improvement (e.g., Asian emissions).

**Why does it matter:** An accurate trend of pollution is essential to understanding the climate impacts of pollution in the past and predicting future climate change.

