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Editors' Highlight

Glyoxal contribution to aerosols over Los Angeles

Laboratory and field studies have indicated that glyoxal (chemical formula OCHCHO), an atmospheric oxidation product of isoprene and aromatic compounds, may contribute to secondary organic aerosols in the atmosphere, which can block sunlight and affect atmospheric chemistry. Some aerosols are primary aerosols, emitted directly into the atmosphere, while others are secondary, formed through chemical reactions in the atmosphere. *Washenfelder et al*. (2011) describe in situ glyoxal measurements from Pasadena, Calif., near Los Angeles, made during summer 2010. They used three different methods to calculate the contribution of glyoxal to secondary atmospheric aerosol and found that it is responsible for 0–0.2 microgram per cubic meter, or 0–4%, of the secondary organic aerosol mass. The researchers also compared their results to those of a previous study that calculated the glyoxal contribution to aerosol for Mexico City. Mexico City had higher levels of organic aerosol mass from glyoxal. They suggest that the lower contribution of glyoxal to aerosol concentrations for Los Angeles may be due to differences in the composition or water content of the aerosols above the two cities.

View abstract

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