

Interactive comment on “Could aerosol emissions be used for regional heat wave mitigation?” by D. N. Bernstein et al.

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Received and published: 2 November 2012

We thank Peter Irvine for his comment. Indeed one of our main points is to estimate the magnitude of the injection that would be required to have impacts on small regional scales. As we note in Sect. 2, we tested for an injection rate that could show the immediate impact on surface air temperature within a short time period and on a small regional scale. In Sect. 4 we demonstrated the calculations of the aerosol mass for different size regional areas and compared them to global annual injections. For example the Los Angeles metropolitan injection area “roughly corresponds to 0.36 Gg of sulfate aerosol emitted over the two-hour interval, . . . roughly 10^{-5} of the sulfur equivalent of the annual injections in a commonly considered global case.” (p.23807 ln.5). Implications are elaborated in Sect. 6.

Interactive comment on Atmos. Chem. Phys. Discuss., 12, 23793, 2012.

ACPD

12, C8935–C8936, 2012

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C8936

