

Interactive comment on “Sulfur-containing particles emitted by concealed sulfide ore deposits: an unknown source of sulfur-containing particles in the atmosphere” by J. Cao et al.

Anonymous Referee #2

Received and published: 2 February 2015

This is an interesting manuscript about particles emanating from the ground in ascending geogas flow. Before recommending publication in ACP, I would like to see more convincing estimates about the potential regional strength of the particle source. In the answer to referee 1, Dr Cao has presented some numbers about sulfur contents in geogas samples, as well as measured geogas flowrates from boreholes. Can an order-of-magnitude estimate about the geogas flow rate to the atmosphere (cubic meters per second) be given for a whole ore deposit area such as Dongshengmiao?

Minor comments:

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P. 28300, line 18: ...should be assessed.

P. 28301, l. 11-13: This sentence is confusing and should be rewritten. Stratospheric sulfur adds very little to the environmental consequences of anthropogenic sulfur that is released to the troposphere and deposits within days to weeks.

P. 28301, l. 17: ...to contain sulfur.

P. 28302, l. 24: ...using ordinary plastic funnels.

P. 28305, l. 23: Why “may be”?

P. 28308, l. 13 onward: The geogas particles will certainly not enter the stratosphere, therefore I don't think large volcanic eruptions should be discussed here although they are mentioned in the intro.

P. 28308, l. 22: The -1.1 Wm^{-2} is quite an old estimate, please give a newer one.

P. 28308, l. 28-29: Incomplete sentence, verb is missing.

Interactive comment on Atmos. Chem. Phys. Discuss., 14, 28299, 2014.

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