

Interactive comment on “In situ aerosol optics in Reno, NV, USA during and after the summer 2008 California wildfires and the influence of aerosol coatings” by M. Gyawali et al.

Anonymous Referee #5

Received and published: 21 August 2009

I find this paper interesting and surely worth publishing after some work. The other reviewers so far have discussed problems in the modeling, I have nothing to add to that.

The measurement part is somewhat inadequately discussed and requires some work. The measurement site, distance to roads, the inlets, cutoffs, etc. are not described at all. They should.

Distance to the wildfires?

There are references to the methods, but I think you should write in the measurement

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section about the calibration and uncertainty of both the absorption and scattering measurements. How does that propagate into the uncertainty of the AEA and the SSA? Do the instruments get saturated during the real smoke plume?

There are only the daily cycles in the figures, I find that inadequate. The time series of the absorption and scattering should be presented, for instance as hourly or daily averages or medians and some measure of the range, in order to see how much and for how long time did the levels actually rise when the wildfire plume arrived at the measurement site.

Reno is dry and there is probably also some absorbing soil dust in the aerosol. Does that have any effect in your results?

p. 14064, L11-12 it is written “The apparent light absorption coefficient ALAOC due to organic carbon aerosol at 405nm is conventionally written as...” If you say conventionally, please give references.

The plots have no error bars, except Fig 5 that has two error bars without any explanations. Add error bars and explanations into the captions.

Anonymous Referee #1 writes. “Section 2.5: It seems that the associated figure is not needed”. This seems to mean Fig. 6 which I particularly like: with one glance you can see differences in various absorbing aerosols and where the present measurements fit. I wish it were kept also the final paper.

Interactive comment on Atmos. Chem. Phys. Discuss., 9, 14059, 2009.

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