

Interactive comment on “Estimation of Dust Downfall Time in Dusty Days using the Correlation between PM₁₀ and Sunphotometer Data” by S. Zolfaghari Nikanjam et al.

Anonymous Referee #2

Received and published: 29 March 2017

This manuscript doesn't have good scientific and presentation quality to be published in AMT. While some very similar statements appear in different places, details about the data (hourly vs daily vs monthly, are sunphotometer and PM10 instrument co-located?) and analysis method are not presented at all. I also have problems in understanding their interpretation of correlations. For example, why do AOD show stronger correlation with PM10 than visibility? how can they determine so-called "downfall time" based on the maximum correlation? What does the "downfall time" really mean? How is the deposition speed of 30mm/s derived (e.g., what kind of assumptions about dust particle size and shape are made?)

The manuscript is poorly written and some terms are not even scientific. Just to name

C1

a few: what is "relative atmospheric stability"? While they call "particulate density" or "dust density", I think that really refers to "particulate concentration" or "dust concentration" in the atmosphere. A sentence like "dust is transmitted in three steps" is kind of awkward. I don't understand "in mountainous areas, evaporation develops a cold air front". What do they mean by using "the dust rain phenomenon"?

I recommend the manuscript be rejected.

Interactive comment on Atmos. Meas. Tech. Discuss., doi:10.5194/amt-2016-405, 2017.

C2