

***Interactive comment on “CUACE/Dust – an integrated system of observation and modeling systems for operational dust forecasting in Asia” by S. L. Gong and X. Y. Zhang***

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The manuscript presents an overview and some highlights of a series of papers related to the development and application of a regional forecasting model of dust storms over Asia. As an overview paper, we learn very little about the model and the results of its application. Some dust forecasting models have been operational for some years, and the originality of the work seems to be in the assimilation of the measurements of dust properties. I guess this model is the results of a tremendous amount of work which needs to be documented through a series of papers. Perhaps it is a question of style, but the present manuscript does not awake a particular interest to start reading the

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other papers and learn more about the model.

My only specific comments concern the figures.

Figure 2: A 1 m/s anomaly of zonal wind speed at 850hPa over China does not seem to be a very strong signal. Does the 1 m/s contour pass 95% (or more) confidence level? What is this black & white inlaid map?

Figure 3: What is the relevance, in an overview paper dedicated to dust storms in Asia, to present a Figure comparing results in the US? Furthermore, the physical meaning of the brown curve is unclear. It depends on what part of the manuscript I read. From the text, I would understand that the SDS is for US, and interpret that the code of SDS detection calibrated over China can also be applied over US. But from the Figure caption, I understand that the SDS is for China. Then I would interpret the Figure as an illustration of the correlation between dust storms over Asia and dust concentration at the surface on the US West coast. But this is beyond the subject of this manuscript, and would need much more data to support. I would replace this Figure by one more relevant.

Figure 4: Good and informative figure. I suppose that the caption should read “SDS observation stations” by the “CMA”.

Figure 5. The plots are ineligible and the caption is not helpful.

Figure 6. On the right panel, what is the value of the pink shading, or is it Chinese characters? What are all these inlays? What is this new acronym “CAWAS” in the title?

Figure 7. Where is located Zhurihe? Do you think mentioning that it is located West of Onqin Daga is helpful?

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