

Interactive comment on “The impact of Great Basin Desert dust on the summer monsoon system over southwestern North America” by C. Zhao et al.

Anonymous Referee #1

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The paper could be accepted by ACP after some minor modifications:

The radiative effects of dust aerosols are determined by the dust refractive indices, which should be regions, dust sizes, and wavelengths dependent. The authors used the refractive index the same as Saharan dust ($1.53 + 0.003i$), so the concluded results may be similar to Saharan dust. The authors should state this issue more clearly or use a different refractive index (such as the one from Asian deserts) to see any differences.

Page 31738: "Therefore" should be "However"?

Model description: Is the 10-m wind related to the stability conditions for the dust source function? Is the dust size distribution lognormal? Is the dust lifting related

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to the soil moisture? A brief statement at the dust emission scheme will be better.

Interactive comment on Atmos. Chem. Phys. Discuss., 11, 31735, 2011.