

***Interactive comment on “Heterogeneous ice  
nucleation on dust particles sourced from 9  
deserts worldwide – Part 1: Immersion freezing”  
by Yvonne Boose et al.***

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Received and published: 17 June 2016

Mineral aerosol particles in the atmosphere and on the surface of soils rarely, if ever, do not contain associated biological material. As is well known, biological materials are the warmest IN observed in nature. Desert dusts are most readily generated in playas that are deposited by water that has concentrated small mineral particles and associated biological material into lower level areas. Desert dusts that travel appreciable distances rarely are sourced from the tops of sand (mineral) dunes. In this paper, it may be disingenuous to ascribe the measured IN content solely on the mineral content of the particles. The authors may consider heating the desert dusts in a furnace and boiling samples before and after the immersion IN freezing tests to remove the organics. If the

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sample IN contents are unchanged, the authors and their audience may be somewhat assured that the mineral components of the samples are the IN source and not organic passengers. Russ Schnell, NOAA, Boulder, CO

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Interactive comment on Atmos. Chem. Phys. Discuss., doi:10.5194/acp-2016-438, 2016.