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Atmospheric Chemistry and Physics Discussions

Interactive comment on "The unique properties of agricultural aerosols measured at a cattle feeding operation" *by* N. Hiranuma et al.

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This is a good paper, it combines measurements from SMPS, PAS, PIZE sampler and RM to characterize the PM from a feedlot. The title intends to present the physical and chemical properties of the aerosols measured at a feedlot, actually the MS is about size, concentration and chemical composition, probably the title needs a bit of alteration to fit in the major content of the article?

There are various gaseous species emitted from livestock, as stated in this Ms: "Gaseous emissions from livestock include methane, ammonia, and nitrogen oxides..." Ngwabie et al.(Landbauforschung Völkenrode 57 2007, 273–284) summarized those possible VOCs. Specially, Ge et al. (Atmos.Environ., 2011, 45, 524-546 and 561-577) list animal husbandry as a major source for amines, and explained the presence of

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particular amines. Is there any link for other species between their presence in the particle phase and corresponding gas precusors worthy to discuss?

A suggestion for the figures: the authors may need to use different colors for better representation of the results, such as for figures 3 and 4. In Fig.7, there are microscopic image for the particles, is there any coupled EDS analysis for the elemental composition?

Interactive comment on Atmos. Chem. Phys. Discuss., 11, 14417, 2011.