

Interactive comment on “Retrieval of desert dust aerosol vertical profiles from IASI measurements in the TIR atmospheric window” by S. Vandebussche et al.

Anonymous Referee #1

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Paper is well written, needs some clarifications especially with respect to comparing retrieved aerosol parameters from IASI data, with those from A-Train instruments such as MODIS and Calipso.

As the paper alludes to, obtaining aerosol height information would be very useful when determining radiative forcing of aerosols. Infrared instruments are indeed sensitive to heights of clouds and aerosols.

Being able to determine the complete aerosol vertical profile is indeed impressive, and needs to be backed up with more analysis. Could the authors back up their claims

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(shown in the current version via kernel functions) by producing and showing jacobians with respect to aerosol amounts, as a function of height? This would help settle doubts in this referee's mind that the authors do indeed have sensitivity not only to the top of the aerosol layer, but also to the bottom.

Interactive comment on Atmos. Meas. Tech. Discuss., 6, 4511, 2013.

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