

***Interactive comment on “The Impact of Neglecting Ice Phase on Cloud Optical Depth Retrievals from AERONET Cloud Mode Observations” by Jonathan K. P. Shonk et al.***

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Kudos to the authors for this very well executed study and write-up. Implementation of the suggested linear correction factor for measured optical depths larger than 20 will provide a much needed improvement to current data bases of cloud optical depth and fraction.

The only question that I have for the authors, who are free to address as they wish, is if local sounding information could be used to constrain estimates of cloud ice fraction when other types of measurements from radar or microwave radiometers are not available. Estimates of cloud base/top temperatures that can be derived from the 0 or 12Z

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soundings might be useful in this regard.

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